SUPPLEMENT.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

| The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

2192.-Vol. XLVII.

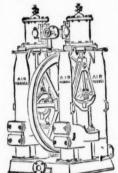
LONDON, SATURDAY, AUGUST 25, 1877.

JOHN CAMERON'S PECIALITIES ARE ALL SIZES OF

m Pumps, Shipbuilders' Tools,

BAR SHEARS. ESTABLISHED 1852.





FIELD ROAD IRON WORKS, SALFORD, MANCHESTER.



Represented by Model exhibited by this Firm.

HARVEY AND CO.

INEERS AND GENERAL MERCHANTS. HAYLE, CORNWALL,

OFFICE,-186, GRESHAM HOUSE, E.C. MANUFACTURERS OF

Head other LAND ENGINES and MARINE STEAM ENGINES inset and most approved kinds in use, SUGAR MACHINERY, MORE MINIOR MACHINERY, AND MACHINERY IN GELL SHIPBUILDERS IN WOOD AND IRON.

MANUFACTURERS OF BAND'S PATENT PNEUMATIC STAMPS.

CONDHAND MINING MACHINERY FOR BALE,

IN GOOD CONDITION, AT MODERATE PRICES—VIL., ENGINES; WINDING ENGINES; STAMPING ENGINES; HAN QUETANS; ORE CRUSHERS; BOILERS and PITWORK of wind search exceptions; and all kinds of MATERIALB required for HIS PURPOSES.

LYON & DAVISON,

ONFOUNDERS, ENGINEERS, &c., on Bridge, near NEWCASTLE-ON-TYNE,

MELTING, REDUCING, AND REFINING FURNACES, MAG HEARTHS, AND SMELTERS' WORK GEAR. es furnished for improved Lead or Copper Mining and Smelting Plant.

LAWRENCE ROPE WORKS,

NEWCASTLE-ON-TYNE. Established 1782. HOMAS AND WILLIAM SMITH,

sward all hinds of Iron; Steel, Copper, and Galvanised Wire Ropes; establis Ropes, &c.; Round and Flat Shaft Ropes; Crab Ropes; Guide Ropes; and Galvanised Signal Strand; Ship's Standing Rigging size; Exast Ropes; and Galvanised Signal Strand; Ship's Standing Rigging size; Exast Ropes; and Galvanised Signal Strand; Ship's Standing Rigging size; Exast Ropes; Tanda Cables, and Flat Hemp Ropes for Driving that Far for Telegraph Cables, and Flat Hemp Ropes for Driving that Far for Telegraph Cables, and Stand Lightning Conductors, &c. of Standard Ropes for Prices—

SIM STREET, NEW CASTLE-ON-TYNE; DOCK YARD, NORTH SHELDS; 17, PHILIPOT LANE, LONDON, E.C.

SMARTHER STREET, Street Ropes for Rope Ropes for Rope Ropes for Ropes for Rope Ropes for Ropes for Ropes Ropes Ropes for Ropes Ro

ANDARD LUBRICATING OILS COMPANY, LIMITED.

and PALE OILS for MACHINERY, RAILWAY, and MININ THE TWO SHILLINGS per gallon, and upwards. AGENTS WANTED.

W, CANNON STREET, LONDON, E.C.

ALEX. CHAPLIN AND CO.,

USTONHILL ENGINE WORKS, GLASGOW. PATRITEES AND SOLE MANUFACTURESS OF

RAPLINS PATENT STEAM CRANES, HOISTS, MOTIVES, AND OTHER ENGINES AND BOILERS.

LONDON HOUSE: McKENDRICK, BALL, AND CO., TREE VICTORIA STREET, LONDON, E.C.







PARIS, ORDER OF THE CROWN OF PRUSSIA. FALMOUTH, BRONZE MEDAL, 1867. SILVER MEDAL, 1867

A DIPLOMA-HIGHEST OF ALL AWARDS-given by the Geographical Congress, Paris, 1875-M. Favre, Contractor, having exhibited the McKean Drill alone as the Model Boring Machine for the St. GOTHARD TUNNEL.

SILVER MEDAL of the Highland and West of Scotland Agricultural Society, 1875-HIGHEST AWARD.

At the south end of the St. Gothard Tunnel, where

Are exclusively used, the advance made during eight consecutive weeks, ending February 7, was 24:90, 27:60, 24:80, 26:10, 28:30, 27:10, 28:40, 28:70 metres. Total advance of south heading during January was 121.30 metres, or 133 yards.

In a series of comparative trials made at the St. Gothard Tunnel, the McKean Rock Drill continued to work until the pressure was reduced to one-half atmosphere (7½ lbs.), showing almost the entire motive force to be available for the blow against the rock—a result of itself indicating many advantages.

The GREAT WESTERN RAILWAY has adopted these Machines for the SEVERN TUNNEL; the LONDON AND NORTH-WESTERN RAILWAY for the FESTINIOG TUN-NEL: and the BRITISH GOVERNMENT for several Public Works. A considerable number of Mining Companies are now using them. Shafts and Galleries are driven at from three to six times the speed of hand labour, according to the size and number of machines employed, and with important saving in cost. The ratio of advantage over hand labour is greatest where the rock is hardest.

These Machines possess many advantages, which give them a value unapproached by any other system of Boring Machine.

THE MCKEAN ROCK DRILL IS ATTAINING GENERAL USE THROUGHOUT THE WORLD FOR MINING, TUN-NELLING, QUARRYING, AND SUB-MARINE BORING.

The McKEAN ROCK DRILLS are the most powerful—the most portable—the most durable—the most compact—of the best mechanical device. They contain the fewest parts-have no weak parts-act without shock upon any of the operating parts-work with a lower pressure than any other Rock Drill-may be worked at a higher pressure than any other may be run with safety to FIFTEEN HUNDRED STROKES PER MINUTE—do not require a mechanic to work them—are the smallest, shortest, and lightest of all machines-will give the longest feed without change of tool-work with long or short stroke at pleasure of operator.

The SAME Machine may be used for sinking, drifting, or open work. Their working parts are best protected against grit and accidents. The various methods of mounting them are the most efficient.

N.B.—Correspondents should state particulars as to character of work in hand in writing us for information, on receipt of which a special definite answer, with reference to our full illustrated catalogue, will be sent.

PORTABLE BOILERS, AIR COMPRESSORS, BORING STEEL, IRON, AND FLEXIBLE TUBING.

The McKean Drill may be seen in operation daily in London.

McKEAN AND CO.

ENGINEERS. OFFICES.

42 BOROUGH ROAD, LONDON, S.E.; and 5, RUE SCRIBE, PARIS.

MANUFACTURED FOR MCKEAN AND CO. BY MESSES, P. AND W MACLELLAN, "CLUTHA IRONWORKS," GLASGOW.

Warsop Rock Drill

Requires only 20 lbs. steam or air-pressure. Has only two moving parts—thus ensuring freedom from de-rangement, and is absolutely self-feeding.

Is excessively light, and can be carried by one man, who can with the No. 1 size (weighing only 35 lbs.) drill 40 holes \(\frac{1}{8} \) in diameter and \(1 \frac{1}{2} \) in deep per minute, in the hardest Aberdeen granite for splitting purposes.

WARSOP AND HILL,

HYDRAULIC AND GENERAL ENGINEERS.

NOTTINGHAM.

STEAM and HYDRAULIC WINDING and PUMPING ENGINES of all kinds.

DUNN'S ROCK DRILL,

AIR COMPRESSORS, DRIVING BED ROCK

TUNNELS, SINKING SHAFTS, AND PERFORMING OPEN FIELD OPERATIONS, IS THE

CHEAPEST, SIMPLEST, STRONGEST, & MOST EFFECTIVE -DRILL IN THE WORLD.

OFFICE,-193, GOSWELL ROAD

(W. W. DUNN AND CO.),

LONDON, E.C.

PATENT SELF-ACTING MINERAL DRESSING MACHINE COMPANY

(LIMITED).

T. CURRIE GREGORY, C.E., F.G.S.

OFFICES,-GLASGOW: 4, WEST REGENT STREET. LONDON: 52, QUEEN VICTORIA STREET, E.C.

IMPORTANT NOTICE TO MINE PROPRIETORS.

MR. GEORGE GREEN, ENGINEER, ABERYSTWITH SUPPLIES MACHINES under the above Company's Patents to DRESSING all METALLIC ORES. Dressing-floors having these Machines pos 1.—THEY ARE CHEAPER THAN ANY OTHER KIND IN FIRST OUTLAY.

2.—ONLY ABOUT ONE-FOURTH OF THE SPACE USUALLY OCCUPIED BY DRESSING-FLOORS IS REQUIRED.

3.—FROM 60 TO 70 PER CENT. OF THE LABOUR IN DRESSING, AND FROM 5 TO 10 PER CENT. OF ORE OTHERWISE LOST, IS SAVED. 4.—THEY ARE THE ONLY MACHINES THAT MAKE THE ORE CLEAN

FOR MARKET AT ONE OPERATION. They have been supplied to some of the principal mines in the United Kingdom ad abroad—viz.,

and abroad—vir.,

The Greenside Mines, Patterdale, Cumberland; London Lead Company's Mines Darlington, Colberry, Nanthead, and Bollyhope; the Stonecroft and Greyside Mines, Hexham, Northumberland; Wanlockhead Mines, Abington, Scotland (the Duke of Buceleun's); Bewick Partners, Haydon Bridge; the Old Darren, Esgairmwyn, and Ystumtuen Mines, in Cardiganshire; Mr. Beaumont's W.B. Mines, Darlington; also Mr. Sewell, for Argentiferous Copper Mines, Peru; the Bytaberg Copper Mines, Norway, and Mines in Italy, Germany, United States of America, and Australia, from all of whom certificates of the complete efficiency of the system can be had.

WASTE HEAPS, consisting of refuse chats and skimpings of a former washing, containing a mixture of lead, blende, and sulphur, DRESSED TO A PROFIT.

Mr. Bainbrige, C.E., of the London Company's Mines, Middleton-in-Teesdale, by Darlington, writing on the 20th March, 1876, says—"The yearly profit on our Nanthead waste heaps amounted last year to £600, tesides the ma-chinery being occupied for some months in dressing ore-stuff from the mines. Of course, if it had been wholly engaged in dressing wastes our returns would have been greater; but it is giving us every satisfaction, and bringing the waste heaps

Mr. T. B. Stewaet, Manager of the Duke of Buccleuch's Mines, Wanlockhead, Abington, N.B., writing on 20th March, 1876, says—"I have much pleasure in stating that a full and superior set of your Ore Dressing Machinery has been at work at these mines for fully a month, and each day as the moving parts become smoother, and those in charge understand the working of the machinery better, it gives increasing satisfaction, the ore being dressed more quickly, cheaply, and satisfactorily than by any other method."

Mr. BAINBRIDGE, speaking of machinery supplied Colberry Mines, says—" Your machinery saves fully one-half on old wages, and vastly more on the wages we have now to pay. Over and above the saving in cost is the saving in ore, which is a .t much short of 10 per cent."

GREENSIDE MINE COMPANY, Patterdale, near Penrith, say-"The

Mr. MONTAGUE BEALE says—"It will separate ore, however close the mechanical mixture, in such a way as no other machines can do."

Mr. C. Dodsworth says—"It is the very best for the purpose and will do for any kind of metallic ores—the very thing so long needed for dress-ing-floors."

Drawings, specifications, and estimates will be forwarded on application to-GEORGE GREEN, M.E., ABERYSTWITH SOUTH WALES.

SELF-ACTING CIRCULAR SAW BENCE,

ENGINEERS, LINCOLN. ROBEY



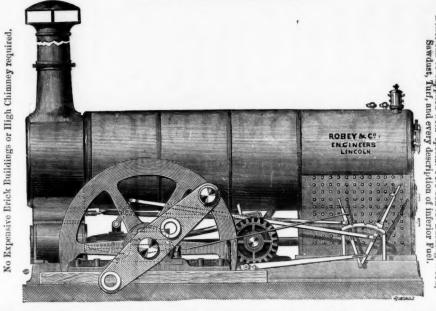
THE PATENT ROBEY FIXED ENGINE AND LOCOMOTIVE BOILER COMBINED,



STATIONARY STEAM ENGINE TENT BOILER COMBINED,



SUPERIOR PORTABLE ENGINES,



PATENT IMPROVED ROBEY MINING ENGINE,

OF ALL SIZES, FROM 4 TO 50-HORSE POWER.

Some of the advantages of this New Engine are as follows:-SMALL FIRST COST. SAVING OF TIME AND EXPENSE IN ERECTING. EASE, SAFETY, AND ECONOMY IN WORKING. GREAT SAVING IN FUEL.

This New Engine is free from all the objections that can be urged against using the Semi-Portable Engine for permanent work, because it possesses the rigidity and durability of the Horizontal Engine, and at the same time retains the advantages of the Semi-Portable in saving time and expense in fixing.

THE PATENT ROBEY FIXED ENGINE

(Also above illustrated) is admirably adapted for driving Rolling Mills, Saw Mills, Brick Machinery, Pumping Machinery, and all descriptions of Fixed Machinery.

ENGINES UP TO 200 EFFECTIVE HORSE-POWER ALWAYS IN PROGRESS.

Prices and full particulars of all the Machinery here illustrated on upplication to the Sole Manufacturers,

ROBEY & CO.,

ENGINEERS, LINCOLN, ENGLAND.

London Office: 117, Cannon Street, London, E.C.



1MPROVED HORIZONTAL FIXED STEAM ENGINE, 4 to 60-horse Power

PATENT

"INGERSOLL ROCK DRILL,"

LE GROS, MAYNE, LEAVER, & CO.,

60, Queen Victoria Street, London, E.C. 5, PARK PLACE, NEW YORK, U.S.A.



tracts from the re-ports of Judges in awarding Medals:— "2. Its simple construction ensures

construction ensures durability &c.

"4.—The steam or air cushions at each end of cylinder effectually protect from injury "5. Its having an automatic feed, giving it a steady motion, &c.

"6. Its greater steadiness and absence of jar and vibration experienced in other drills, which is very destructive to their working

parts, &c.
"7. Its greater power is some FORTY PER CENT. in favour of the

Medals awarded for several years in succession "For the reason that we adjudge it so important in its use and complete in its construction as to supplant every article previously used for accom

plishing the same purpose."

Estimates given for Air Compressors and all kinds of Mining Machinery. Send for Illustrated Catalogues. Price Lists, Testimonials, &c., as above.

JOHN AND EDWIN WRIGHT.

PATENTRES.
(ESTABLISHED 1770.) MANUPACTURERS OF EVERY DESCRIPTION OF IMPROVED

PATENT FLAT AND ROUND WIRE ROPE

PATENT FLAT AND ROUND HEMP ROPES,
SHIPS RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING COMDUCTORS, STEAM PLOUGH ROPES (made from Wedster and Horsfall)
patent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASIL,
TARPAULING, OIL SHEETS, BRATTICE CLOTHS, &c.

UNIVERSE WORKS, MILLWALL, PCPLAR, LONDON. UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM. CITY OFFICE, No. 5, LEADENHALL STREET, LONDON, E.

"CHAMPION" ROCK THE BORE

STANDS UNRIVALLED

For Tunnels, Mines, Quarries, Harbour Works, Cutting Blocks of Granite, &c.

The working parts are made of the toughest steel and phosphor-bronze—steel castings are also used as to combine strength with light weight.

AIR-COMPRESSING MACHINERY
Of the simplest and best construction.

Combined Water-pressure Engines and Air-compressor Giving most excellent results.

Mechanical and Consulting Engineers, ULLATHORNE & CO., 63. QUEEN VICTORIA STREET, LONDON,

Archer's New Patent Stone Breakers

Sole Makers: DUNSTON ENGINE WORKS Co., GATESHEAD-UPON-TYNE. ENGLAND.

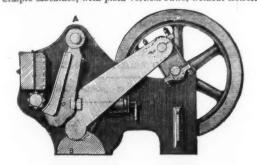
STONE BREAKER.

For Road Metal, &c.

Machines with combined Vertical Jaw and

CUBING ROLLER.

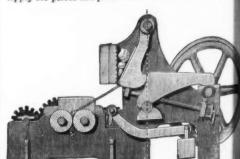
Guaranteed to break more cubical and to make less small than any other Machine. Simple Machines, with plain Vertical Jaws, without Roller.



PULVERISER,

For Crushing and Pulverising Rocks, Ores, En Stone, &c., &c.

Apply for prices and particulars to the Manufacturers, as a



Daxie

the Muscone

ped to drive

ARCHER'S PATENT BONE MILL-Sole Manufacturers.

MANUFACTURERS OF MARINE AND STATIONARY ENGINES; AND COLLIERY MACHINERY, CAGES, TUBS, &c., every description of MACHINERY USED IN CHEMICAL WORKS.

Original Correspondence.

ORE STAMPING MACHINERY.

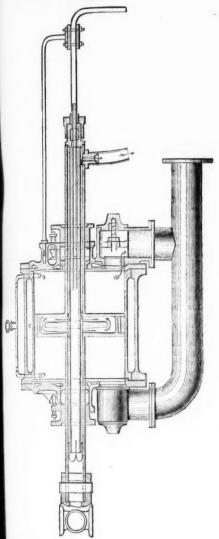
ORE STAMPING MACHINERY.

SR.—The tabulated statement of the comparative working of statement and Cornish stamping mills, contributed by your stain anercan and Cornish stamping mills, contributed by your stain and cornish stamping mills, contributed by your stain and contributed by your statement. The statement of the lith inst., needs some statement. It would appear that the American stamps—Nos. I to 9 and it would be a statement of the states only in the same time. The statement is an extraordinary achievement, and will repay in forrest, is an extraordinary achievement, and will repay in forrest, is an extraordinary achievement, and will repay in forrest, is an extraordinary achievement, and will repay in the states that we can maintain our position present in the concluding remarks of your correspondent where he states that the American stamp, No. 1, requires a state where he states that the American stamp, No. 1, requires a state where he states that the American stamp. On reference that proper to the 100 tons stamped in 24 hours. On reference that be stated that the American stamp, No. 1, requires a state that the American stamp. No. 1, requires a state that the American stamp. No. 1, requires a state that the American stamp. No. 1, requires a state that the American stamp. No. 1, requires a state that the American stamp. No. 1, requires a state that the American stamp. No. 1, requires a state that the American stamp. No. 1, requires a state that the American stamp. No. 1, requires a state that the American stamp. No. 1, requires a state that the American stamp. No. 1, requires a state that the American stamp. No. 1, requires a state that the American stamp. No. 1, requires a state that the American stamp. No. 2, requires a state that the American stamp. No. 2, requires a state that the American stamp. No. 2, requires a state that the American stamp. No. 2, requires a state that the American stamp.

BOCK-BORING MACHINERY-No. IV.

BOCK-BOKING MACHINERI—NO. IV.

MLADON COMPRESSOR.—The Colladon Compressor (fig. 3) conassettially of a horizontal cylinder and a hollow piston, the
assettially of a horizontal cylinder and a hollow piston, the
development of the cylinder
and lacab of these covers are two admission and one delivery
assetted adopted for absorbing the heat developed during the comain of the air and for keeping all the parts cool. The cylinder
Fig. 3. Fig. 3.



ED STEAM

Cuttin

ressor

kers

Ores, Em

turers, as a

rubs, &c.,

eers, IDON. maded by a water jacket, A, the piston and piston-rod have an dambers for the reception and passage of water, while add the barrel of the cylinder is fitted with two jet pieces such which water is forced and broken into fine spray. It fet hat the quantity of water introduced into the cylinder the various parts of the apparatus is so adjusted as to presumperature from exceeding 25° centigrade or 79° Fahr. The the pistons are running at a speed of 200 ft. per minute. The the pistons are running at a speed of 200 ft. per minute. Sin being compressed to 90 lbs. per inch. At the Airolo end has 60thard Tunnel there are twelve of these compressing which well graving and a turbine. The three cylinders which well graving and a turbine. The dimensions of these compressing cylinders are dthese compressing cylinders are

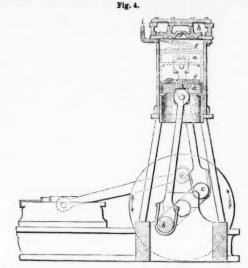
State of pisture	18% inches.
Mosuction valves in and of sech server inter	17 7-10 in.
he discharge valve in., equal 196 area × 2 =	392 area.
Beter of valve 43 in., equal	103 area.
Moretical volume of air per stroke	5.27 cub. feet.
to reach group of three cylinders	15.81 cub. feet.
The order of revolutions per minute	
the cylinders will afford theoretically	1027.65 cub. feet.
haptessure of six atmospheres, or 90 lbs. per space inch, this quantity will be reduced	
. quantity will be reduced	

... 171.27 cub. feet. the actual volume, as proved by experiment, will not amount That To per cent. of the theoretical volume, or (171-27 × 1) only feet. A series of four sizes of these compressor A series of four sizes of these compressor-laminum velocity of 23 ft. per second to drive one, B two

1027.65

blour boring machines.	Α.		B.		C.	, –	D.
	One		One		Two	1	Two
eller of commence	cy	lind	er.		cyl	ind	ers.
teter of compressor pistonIn.	10		15		15		15
mution per minute, maximum	231		31		31		31
only of piston minute, maximum]	24		90		90		90
diy of piston per second Ft. Required, min. vel Hpower light, naximum velocity	74		73		74		74
hair in cubic feet compressed	12		25		50		75
maximum velocity and fair in cubic feet compressed by the per ineb, min, velocity	36		75		150		225
Milb. Des in Cubic feet com pressed							
h M be, per inch, min. velocity Maximum velocity	126		16.8		33.6		50 4
Musconet will we locity	37.8		50.4		100 8		151.2
To to drive Je Tunnel, New Je	PROV	fo	DF CC	2133.5	PAGE	ore	West
Maximum velocity Maximum velocity The Maximum velocity	185,	Th	080 C	om	pres	юг	con-

eisted of two vertical air cylinders (o.pled to a horizontal steam-engine. By referring to Fig. 4 it will be seen that the pistons, A, are worked from a shaft, the cracks, B and C, of which are at an



angle of 180°. With these the driving crank, E, forms an angle of 45° , so that the greatest work of the steam pistons is designed to correspond to the greatest resistance offered to the compressor pistons. The valves, F and G, are circular plates, held in place by vertical guides. The compressed air from the two cylinders is driven into a common chamber, H, and from thence conducted by pipes to a receiver. Water is admitted into the compressor cylinders. pipes to a receiver. Water is admitted into the compressor cylinder through the pipe I, and serves to absorb the heat developed during the compression of the air. To furnish steam to drive the four compressors four tubular boilers of 45-horse power each were

Diameter of each Cylinder 15 inches.
Stroke of piston 18 inches.
One suction valve in each cover, internal diameter
5 in. = area 196
Two discharge valves in each cover, diameter 3 in.,
equal 7.0 area × 2 140
Theoretical volume of air per stroke 1.38 cub. ft.
Or, for the group of three cylinders 4-14 cub. ft.
At a velocity of 50 revolutions per minute three
cylinders will afford theoretically 307 cubic ft.
Volume of air compressed to 50 lbs. per inch, at
70 per cent. of the contents of the stroke 363-10 cub. ft
The extinders of this compressor are engaged in a jecket the in

The cylinders of this compressor are encased in a jacket, the intervening space, about 4 inches, being charged with cold water. In addition a spray jet of water passes into each cylinder during the compression of the air.

JOHN DARLINGTON.

HULTAFALL LEAD AND BLENDE MINES.

SIR,—It may be of interest to many of your readers to know that the proprietors of these mines (a full report upon which appeared in last week's Journal) have decided to furnish them with a complete dressing establishment of the most approved modern kind. As a preliminary step in this direction they have concluded arrangements with Mr. Green, of Aberystwith, engineer and originator of the Patent Self-Acting Dressing Machinery. In pursuance of which that gentleman has just gone over to the mines to inspect the topography of the sett, with the view of selecting an advantageous site for the proposed metallurgical arrangements.

SPECTATOR.

GELLIVARA IRON MOUNTAIN-NEW GELLIVARA CO.

GELLIVARA IRON MOUNTAIN—NEW GELLIVARA CO.

Sir,—In answer to the correspondent's ("C. H. A.") question, in last week's Journal, as to where he could get a supply in quantity of purest qualities of iron ores, sesquioxide of iron, kidney iron ores, red hematite (not under 95 per cent.), I would advise him to apply to the New Gellivara Company, who have a very pure iron on the Gellivara Mountain, fit for the finest Sheffield cutlery, &c. If the Government would give them land grants and facilities for making a railway from Gellivara across Norway to one of the fjords, it would enable them to have an open sea on the Atlantic seaboard all the year round, when they could ship an inexhaustible supply of purest iron to the British Islands. But the Swedish and Norwegian Parliaments, for the good of their country, should imitate what the United States have done with the Pacific Railway Company. "C. H. A." should apply to the office of the New Gellivara Company in London, Mr. H. D. Stead, who, I have no doubt, can satisfy him with a purest quality of iron ore, as they have been doing more for some time past to develope their iron trade.

J. M. N. M.

NATIONAL ASSOCIATION OF COLLIERY MANAGERS.

NATIONAL ASSOCIATION OF COLLIERY MANAGERS.

SIR.—I was glad to observe from the announcement in last week's Journal that this Association is taking a definite form, as there can be no doubt that if it be properly developed it will become one of the most useful institutions in the country, but I am altogether opposed to the incorporation of the benefit society and trade unionism element, and cannot believe that it would make the society one whit more acceptable to any certificated manager who would be worthy of a place on the list of members of the Association. The utility of benefit societies cannot be too highly estimated, and trade unionism is well enough in its way, but neither of these have anything whatever to do with a scientific and literary society such as the National Association of Colliery Managers ought to be. The result of membership should be to give the member a higher position in the respect of colliery owners and the public than he has without it, and I have never yet seen that connection with a Trades Union has improved the reputation of any man, though it has frequently had the proved the reputation of any man, though it has frequently had the everse effect.

The position of certificated managers at the present time is most ansatisfactory, for the Act of Parliament having authorised the issue of certificates of service (and I really do not see how such authorisation could have been avoided without depriving many very useful men of their means of livelihood) there are many entitled to call themselves certificated managers who are really more gnorant than the average working collier—that is to say, they know ess of the nature of mine gases, less of the principles upon which the working of a mine are conducted, and less of the effect of faults and other natural disturbances. And this is not because they do not wish to learn, but because their very position prevents them from doing so. They hold a position for which they are incomperent, yet dare not let those under them know of their incompetency. The certificated manager cannot attend the night school like an ordinaty working collier, because it would be a degradation to do so; so cannot attend high-class lectures, because he has not received unflicient elementary instruction to enable him to understand them. To the ignorant certificated manager, then, the Association, if contituted as a purely technical institution, would be invaluable for a The position of certificated managers at the present time is most tituted as a purely technical institution, would be invaluable for a eason I will presently show.

reason I will presently show.

But how about the highly educated certificated managers? you will ask; for it is, of course, well known that some who hold the certificate of service, and many who have a certificate of competency, have received a careful scientific training which every year

of practical experience renders more valuable to them. To these I answer the Association will be still more useful, for at least in reputation it will put them a generation forward. At present, from the number of ignorant men holding managers' certificates, it is scarcely an honour to be called a certificated manager, and the Association ought to improve the status of the whole body, and thus make connection with it honourable. The whole matter is entirely in the hands of the educated portion, which possesses the power of elevating the ignorant portion, until the whole body is brought into such a condition that it will be as great an honour to belong to the National Association of Colliery Managers as to the Institution of Civil Engineers. Papers could be read by the educated managers which would speedily give their less fortunate colleagues all the information which it is absolutely necessary that they should possess in order to enable them to take part in the discussion of practical mining subjects. The uneducated manager could attend the periodical meetings of the National Association of Colliery Managers, and listen to the reading of papers prepared especially for their instruction, without incurring any of the unpleasantness of attending the night school with the men employed under him.

Whether the project will be a success or failure depends almost entirely upon the character and standing of those chosen for the executive. To secure success all except those of high scientific attainments and long practical experience should be excluded, and, as a rule, certificates of service should be regarded as of little value in comparison with certificates of competency. If this were done, and provided a good supply of really instructive papers could be obtained, a really useful association would soon be firmly established.

MANAGER.

TRACTION ENGINES.

TRACTION ENGINES.

SIR,—The means generally employed to transmit motive power from the crank or first motion shaft of a traction engine or self-moving carriage to the driving wheels of the same consists of a set or sets of spur wheels gearing into a similar wheel keyed on the axle of the driving wheels. This method of transmission is not only costly from the loss of power due to the friction of the working parts, but the wear and tear of the said parts required repeated attention and repairs. To remedy these defects is the object of the invention of Mr. William Fisken, of Stamfordham, Northumberland, to which I should like to direct the attention of the readers of the Mining Journal. For the purpose in view he would have a toothed or ratchet wheel keyed upon the axle of the driving wheels of the traction engine or self-moving carriage. Upon the same axle and embracing the said ratchet wheel are placed two forked levers diametrically opposite each other, the axle of the said driving wheels being their common fulcrum, and upon which they rock when a rocking motion is conveyed to them by means of two longitudinal bars or eccentric rods connecting their extremities with a crank or eccentric on the crank shaft of the said engine, thus a rocking motion is imparted to the aforesaid rocking levers, which by means of pawls or other suitable means acting upon the above-mentioned ratchet wheel is converted into a continuous circular motion, and transmitted through the axle to the driving wheels of the traction engine or self-moving carriage.

Means are provided for reversing this continuous circular motion;

mitted through the axle to the driving wheels of the traction engine or self-moving carriage.

Means are provided for reversing this continuous circular motion; this may be accomplished without reversing the motion of the steam piston by having to each rocking lever a double pawl, the appropriate engagement of which with the said ratchet wheel shall determine the direction of the circular motion of the same. Each double pawl is controlled or brought into proper action by pulling over in the desired direction a reversing lever to which the pawls are suitably connected by rods and springs. This reversing lever may be secured to one of the longitudinal bars and conveniently placed for easy access. The double pawls may be made to rock on their fulcrums by means of eccentric rods suitably connected from eccentrics on the crank shaft; by this means the pawls will be free from the ratchet wheel during the return of the rocking lever, and will be brought into use only when about to engage with the teeth of the said ratchet wheel. This arrangement will avoid the use of springs to keep the pawls up to their work, and the consequent clatter due to the travelling of the pawls over the teeth of the ratchet wheel.—Gateshead, Aug. 18.

H. D. F.

THE MINING INTERESTS-PERSEVERANCE.

THE MINING INTERESTS—PERSEVERANCE.

SIR,—Perseverance in the attainment of the objects in view is, we must all admit, a prime quality in the grain and stamina of every pursuit, whether it be commerce, trade, manufacture, or any other department of the world's industries, and such being the case in a wide and general sense, how much more is it required in mining? Men fail far oftener from a want of perseverance than an absence of talent and judgment in starting their enterprises. Mining too often fails from simple lack of that earnest, patient, and continuous perseverance essentially needed in maturing operations—i.e., the realisation of pioneer points; it is no use to drive cross-cuts, sink shafts, or to extend levels if you stop short of reaching the objects aimed at at starting. Numerous instances of brilliant success can be adduced in favour of perseverance, and of sad failures through the absence of it. the absence of it.

South Caradon, Devon Great Consols, Tresavean, Great Laxey, Carn Brea, Tincroft, with Dolcoath, are instances in favour of per-Carn Brea, Tincroft, with Dolcoath, are instances in favour of perseverance, and many other mines can be enumerated which were abandoned when on the point of achieving success. Again, we have favourable examples to encourage perseverance in the Cambrian, Leadhills, East and West Chiverton, and West Craven Moor; the development of these mines is attended with results that promise at an early date to raise the standard of mining to its former prosperous status among the favourite investments of the day. We by no means advocate niggardly or dilatory expenditure of capital in mining; we insist, however, on practically sound economy being observed in every department. There is no reason for dressing machinery being purchased and erected before the ore is discovered to recoup the cost, nor have the executive to consider the interests machinery being purchased and erected before the ore is discovered to recoup the cost, nor have the executive to consider the interests of merchants, manufacturers, or tradesmen; their aim and conduct should ever gravitate in favour of shareholders, irrespective of any increased popularity they may acquire or advantage they may gain through expending large sums of money when smaller ones will suffice; in fact, "practical miners" regard the adventures under their control as the properties of the shareholders alone, while in some instances favourite market mines are notoriously worked under the supervision of "exports" exclusively for the interests of promoters and their subordinates.

When we reflect that 25 years ago we had no railways or telegraphs into Cornwall or North and South Wales, that the present century has witnessed marvellous advancement in the education and character of the middle classes, the sciences and the arts, in manufacture and machinery, the dressing of ores and the separation of different minerals contained in the same stone, their respective values and uses, together with the greatly increased knowledge prevailing in regard to the formation of mineral deposits, mineralogy, and geology, and of magnetism and electricity, we cannot be surprised at the ignorance of mine agents in the olden times.

South Caradon was abandoned as worthless by a London company, who had their miserably miserably misleading. "exports" to guide them but

South Caradon was abandoned as worthless by a London company, who had their miserably misleading "experts" to guide them, but who, after considerable expenditure of time and money, lacked perseverance, and the company came to grief. A new one, however, was soon formed by two brothers, who possessed slender means and slight repute at the time, yet they proved to be practical miners, and won a mine that has declared dividends of 378,1124. on a capital of 640% only. These brothers made large fortunes through having perseverance and pluck to encounter the additional expenditure of 640%. Again, this company has employed for 30 up to 40 years from 500 up to 1000 workpeople, spent immense sums of money in machinery and materials, and in varied ways benefited the trade and commerce of the district—tradesmen, merchants, bankers, workmen, and executives being alike advantaged through the persecutives. verance of these two practicals in bringing the mine into a suc

position.

The most remarkable instance of rapid discovery during the present century was witnessed at the Devon Great Consols, about the year 1845. This property was abandoned by the "experts," and

acon after secured by that indefatigable and persevering miner, Mr. Josiah Hitchins, of Tavistock, who, upon an expenditure of 1024L, raised its commercial value to 1,000,000L. Nor was this price 1024L. raised its commercial value to 1,000,000. Nor was this price unwarranted or greatly in excess of its actual worth, for the company is still profitable, and declared a dividend of 2560L in July. This lode proved wonderfully profitable, but I understand that it was the high character of the gossan back which first rivetted Mr. Hitchins' attention, Mr. Hitchins' remarkably prophetic words at an early stage of the development of the lode being the following:—
"This property is pregnant with such astounding resu ts as will surprise the world;" the close upon 1,200,000L in dividends which has been paid being a brilliant realisation of that prediction. This property, from the year 1845 to 1872 inclusive, sold 567,637 tons of copper ores, the money value being 3,058,109L, to which must be added other credits (94,469L), raising the total to 3,150,578L. Of this sum 1,352,310L was expended in miners' labour, and in steamengines, water-wheels, railway, machinery, timber, iron, and other this sum 1,302,310% was expended in miners labour, and in steamengines, water-wheels, railway, machinery, timber, iron, and other
materials, taxes, water rent, salaries, office expenses, &c., the sum of
362,970%. The Duke of Bedford for dues or royalties received the
sum of 240,000%, and the shareholders, who had expended 1024%.
only, had dividends of 1,186,818%, or close on twelve hundredfold
their original outlay. The balance carried over in 1872 was 8474% 7s.,
since which date the company has been reorganised, and consists
now of 10 240 shares of 5% each, with 1% called up; marketable at
4% 10s. to 5%. The prospects have greatly advanced of late.

Again, Cambrian Mines (Limited), and fully paid up, are situate
in Carriigan-hire, and exhibit unmistakeable signs of va-t deposits

in Cardiganshire, and exhibit unmistakeable signs of va-t deposits of mineral wealth, both as regards copper and lead. The company' concession is most extensive, and possesses scope for two or thre separate mines. The Esgair Hir has yielded immense quantities o The company's lead ore, and a long course of it is already discovered, requiring only time and perseverance to develope into a prosperous mine like the Van. Lisburne, Dyliffe, and Cwmystwith stand in the same north and south or magn-tic parallel with it. Practical management, as at South Caradon, Devon Great Consols, Tresavean, Carn Brea, Tincroft, and other great important mines in Cornwall, North and South Wales, Yorkshire, and far north and south into Southand, is resouth wates, forkshire, and far north and south into Soot and, is required to ensure success. The Begair-ffraith is already an established success. The ores are rich in character, and found in bulk, the lode being worth 50% to 60% per fathom for each. Leadhills continues to open out well, and the yield will materially augment. The ores realised for the four months since the dividend of 6s. a share was declared in Barch last will fully justify the directors in paying another shortly. There is something affecting the market value of these shares, otherwise they would advance on merit. This is a market wine and probably in the present decreased acts of the Steel , and probably in the present depress-d state of the Stock ange business there is a leverage at work to lower the prices, ther quotations. This mine, the Hultafall, and the Cambrian or rather quotations. or rather quotations. This mine, the Hultafall, and the Cambran must be regarded as the three established properties, par excellence, of the pre-ent year.

Carn Brea, Tincroft, and Dolcoath.—The two first mines were

started for a second or third time about the year 1834 or 1835, having been exceedingly rich and profitable, though twice abandoned as worthless. These mines have netted the present companies 308,000% and 302,550%, on 36,375% and 54,000% capitals respectively. Dolcoath shares fell about the years 1837-38 to 8L and 10L per 179th share, and several shareholders relinquished for the value of the materials rather than respond to small calls to resuscitate the pro perty, which had gradually collapsed through the exhaust on of the shallow deposits of ore. It is a singular reward to the shareholders who held and persevered over a period of 14 years without a single divid-nd, that the shares have since been multiplied by 24, and sole

dividend, that the shares have since been multiplied by 24, and sold at 90% one (2160%) for the original 8% to 10% share. The aggregate dividends have been 480,000%. So much for earnest perseverance.

Great Laxey shares are firm at 21 to 21½. There is a permanency in this property that defies the efforts of dealers in shares o depress quotations of prices, or to destroy the confidence of shareholders, sellers being very scarce on Change. The dividends are 10s, quarterly, thus purchasers secure 9½ to 10 per cent, in buying at ruling prices. The aggregate dividends up to date amount to 332,250%, just over five and half-fold the outlay. The dividends are at the rate of 30,000% annually, or 50 per cent, on the paid-up capital. The finance is sound, the reserves of lead and blende ores large, and the machinery for all purposes replete and adequate, while the executive is strictly practical, but the success of this mine has been checkered, and is attributable to the great principle of perseverance carried out under difficulties.

mine has been checkered, and is attributable to the great principle of perseverance carried out under difficulties.

East and West Chiverton adjoin, are traversed by the same lodes, and under the same management. Capt. Southey writes most confidently of the discoveries made and the promise as regards the future. The locality is sound in respect of geological position; the mines so situated and worked practically, economically, and with perseverance have invariably proved successful. As examples we enumerate West Chiverton, Old Shepherd, and East Rise. These mines were defacts in their development less promising than the East Chiverton is at present, while it may be added that than the East Chiverton is at present, while it may be added that the ore is found at the same depth as the main deposits in the three important properties referred to, and which in their day were stars of the first magnitude, though exceptionally adverse circumstances caused the workings to be abandoned at both East Rose and Old

Tresavean, abandoned as a failure, was taken up by the late Mr. The saves, abandoned as a failure, was taken up by the late Mr. Thomas Tengue, who was one of the most plucky and per-evering miners in Cornwall; with an outlay of about 1000l. he succeeded in discovering deeper deposits of mineral wealth. The mine is a very dry one, and the lodes were productive in the granite, becoming profit ess when they pass into the clay-slate. Under different companies this old mine has made 800,000l, profits. From the year 1814 to June 1848, it returned the enormous quantity of 377,970 tons of copper over, which realised 1,879,735l. The last company was divided into 96 shares, and only 3120l, was paid thereon. It netted profits to the amount of 453,790l. The highest amount of dividends in one year was 60,480l.: the shares about this time were marketin one year was 60,480*l*.; the shares about this time were marketable at 2500*l*. each, 32*l*. 10s. paid, and at that price the value was only four years' purchase. This mine, and almost every other great

success, sprang from continuous practical perseverance.

Repudiation is a significant, yet a very ugly, word, still we are told there is a model panic, so to speak, at Buenos Ayres, because "properly will not fetch 50 per cent, in paper money of what in 1874 and 1875 it would have brought in gold." There are a great many State, municipalities, and corporations besides Buenos Ayres in North and S suth America and in various parts of Europe drifting in North and South America, and in various parts of Europe, drifting into a state of un-nyiable embarrassment, and before we have settled the general indebtedness of the "world to England" we shall witness many such "scenes" as that now being enacted at Buenos Ayres, which is a land, we are assured, literally flowing with milk and honey. It is not a community stricken with famine or pestilence and dwelling in a land where the earth refuses its increase. It happens to be one of the richest and grandest of countries, where climate, soil, and all the essential conditions of prosperity characterise a most harmonious and effective combination. If such a panic exists at Buenca Ayres, what can we expect a year hence at panic exists at Buenos Ayres, what can we expect a year hence at St. Petersburg and Stamboul? The colossal amount of foreign debt due to England makes us dwell more forcibly and seriously on the subject than we otherwise should. There can be no question that Great Britain possesses almost inexhaustible mineral and metallic wealth; hence, is it not far preferable to work our mines than to lend without advantage to the working masses our money to the

South Caradon still pays 2L a share dividend four-monthly, and are marketable at 110L each, with 1L 5s. called up. Devon Greet Consols gave a 5s. dividend last month, and shares sell at 4½ with 1L called up. Great Laxey pays 10s. quarterly, and sells at 2L a share. Cara Brea, Tincroft, and Dolcoath shares sell respectively at 28, 12, and 25 each

There are other and very important mines now on the tepis, and could this notice fall under the observation of persevering capitalists they will clearly comprehend that there are as good prizes to be secured as ever rewarded the "Clymo's" in South Caradon, Hagt and West Caradon, the Trelawny, Mary Ann, and Herodsfoot, or in the case of "Mr. Josiah Hitchins" in Devon Great Consols,

Bedford United, South Tamar, Holmbush, and Hingston Down; a "Bennett" in the Deep Level, Tolvaiden, Alfred Consols, and a Trenow Consols, or the never to be forgotten "Treffery" in Lianescott, Par Consols, and Fowey Consols; a "Teague" in Tincroft and Kitty; again, a "Lyle" in North Basset, West Basset, and Great South Tolgus; a "Tredinnick" in a St. Ives Consols, Trenwith, Darlington, and an East Crofty, the only thing required being perseverance, and a resolute determination to work the mines, and to await the development thereof to make sure of substantial dividends upon money expended by original shareholders, instead of embarking in properties the inherent worth of which has been over-discounted by properties the inherent worth of which has been over-discounted by

keen Stock Exchange speculators.

As, for example, ten shares in each of the subjoined ten mines would have entailed to an original shareholder the subscription of

los. only:-					C	apital	l.	Ð	ividends.		Mar	ket price
South Caradon		***	***		£	124		4	€ 7,385	***	4	21.100
Van		***	400	***		4254		***	2151/4		***	330
Great Laxey	910	***				40	***	***	221 16		***	210
Lisburne	***	***	***	***		18756	100	***	5,825	***	***	750
Minera	***		***	***		50		***	670	***	***	100
Devon Great C	onso	ls	970	***		10		***	11,650		***	450
Basset	***	4			:	31134		***	6,385	***	***	_
Tincroft	242					90		***	50414		***	120
West Chiverto	n				1	125	***		550		***	140
Wicklow	400	***	***	***		25	***	200	525	***	***	_
											-0.0	

Total £793½ £33,931½ £3,200

Thus, 793½ 15s. subscribed on ten shares in each of the above ten mines would have returned 33,981½ 10s. in dividends, leaving the shares in eight of them dealt in on the Lundon Stock Exchange with 3,500½ for prepent realisation. worth 3200l. for present realisation. R. TREDINNIC Consulting and Advising Mining Exchange, 66, Coleman-street, London, E.C., Aug. 20. NNICK, ining Engineer.

MINING IN CORNWALL - BEDFORD UNITED.

SIR,-In the lull and stagnation of business generally, I believe here is no denser atmosphere than that at present surrounding nining enterprise, but the fact should not be lost sight of that no dverse influence at surface, whether arising from the low price of metals or any other cause, can affect the character of lodes under letals or any other cause, can alreet the character of local states of round. Notwithstanding, under these depressions there is a dissocition to beeloud everything in connection with mining. There is no doubt that this is the time to make money by investing in mines, but whoever gains does it generally through the sacrifice of others, and I begin to feel that the losses we often sustain are owing in a great measure to the very meagre information we get from our agents, as furnished by the usual weekly and quarterly reports. Now, we are well aware that a mine may be reported on in different ways, and that the agents have different modes of justifying themselves in respect to their reports. A small number of shareholders only know anything of the mode usually adopted to ascertain the value of the ore ground or reserves of a mine, and who, from the usual reports, can approximate the value of the holding they have in the mine. Furnished with a satement of the value of ore ground or reserves of any productive mine, I maintain that it is just as practicable to ascertain the value of a person's interest in a mine as o learn his position at a bank by a reference to his bank account.

It is cheering to observe that there are some stars in the mining ty whose brightness appears to be breaking through the prevailing soom. Of those being noticed, I would at present call attention to the Bedford United. This star having long been the subject of prophecy by both old and younger prophets, I have kept a steady eyewatching its growing lustre. I remember its shining having attained in money value to the amount of many thousands during the hate management; in fact, it looked very brilliant when the new manager assumed authority, and, aided by an increase of both water and steam, as a moving star it has had a shining course during the last twelve or more months, and dull must be the eye that does not see its brightness. Probably the telescope has not been placed before all eyes at the same focus. It is a source of satisfaction to many, I understand, that nothing has of late been heard of boring machines being applied to this star as a propelling power, as it is considered by ke-n observers that it is moving fast enough without them—at least for the present. Should further appliances be requiote for judicious working, practical toping of some of the valuably ground would meet the cost of the same without further calling upon the adventurers. Judging from calculations made upon the reports of the last f-w years, I e-timate that there must be a reserve of from 20,000% or 30,000% worth of ore now laid open, which is being monthly increased by the value of 1000%. I do not understand that communication has been effected to the 127 west, and hoped by this time that a winze would have been sunk through this very rich portion of the mine. I remember that on the shaft reaching this level the lode was reported to be of great value, with at a c-rtain oint near 100/ per fathom. I presume that operations in this direc-tion would increase the monthly returns to the extent of at least 150/. Although my name does not appear in the share list of this mine, think it right to state here that I am indirectly heavily interested.

and, in conjunction with many of the shareholders, express a hope that the majority will see to their own interest, and effectually pro-test against the confirmation of "limited liability" fixed for the 30th inst. That the adventur-rs should be asked to sanction this measure is superfluous, which in effect is asking 1*l*. per share a-calls, when the reserves, if properly managed, would be found sufficient to support such a practical mode of operation as would in a little time become highly profitable.

JOSIAH WEDGEWOOD.

ittle time become highly profitable.

Tavistock, Aug. 22.

WHEAL GRENVILLE.

SIR,-I agree with some of "Shareholder's" remarks in last week's Journal, but to other portions of his letter I must object. In your columns of June 30 the secretary of Wheal Grenville made some severe observations in reference to West Busset Mine, and some severe observations in federate to west based affice, and said, "When one considers the fact that the committee did, if it does not now, consist of two tin smelters, an engineer, and a tin-stone buyer it is easy to discern that other interests than these of the shareholders were in the minds of the executive." The insinnation underlying this would be beneath the notice of every honourable man to whom the parties reflected upon are known were it not subsequently supplemented by condemnatory observations upon subsequently supplemented by condemnatory observations upon the quality of some materials supplied to a mine of which Mr. Laws is himself the secretary. In the Journal of Aug. 4 Mr. Laws con-demned pitwork which had been purchased for Wheal Grenville, and on Aug. 11 he writes an apology, saying that "He was mis-taken, and that he has now ample evidence that the pumps he had previously condemned are all that is desired, and fully equal to the uties required of them; at the same time he wishes to state that no intentior to cast any reflection upon the committee of Wheal Grenville.

Comment upon all this is superfluous, I will only remark that I hope for the future before Mr. Laws rushes into print with insinuations against the honour of local executives, he will not forget the amount of humble pie he has evidently awallowed to satisfy the honour of one of his own committees. With regard to Shareholder's" eulogies on Capt. Hodge and his management, they may be all deserved, but your correspondent is evidently an en We were told when Capt, Hodge was appointed ers had done wisely, and that they would very husiastic admirer that the shareholders had done wisely, and that they would ver soon see a great change for the better in the affairs of the company Will "Shareholder" point out where this change appears? Will he say that it is in the large amount of money the shareholders have been called upon to subscribe, and in the erection of extensive machinery and other appliances which every disinterested and prudent

person must condemn.
As has often been stated in the Journal, when the Wheal Gren-As has often been stated in the Southal, when the which committee took office they told the shareholders it was absolutely necessary, to ensure the future favourable progress of the company, that the whole of the old managers should be discharged. Who does not remember the boastings—the flattering promises of subsequent meetings, the repeated assurances of the satisfactory progress of the mine, and its quarterly enhanced prospects? Can your enthusiastic correspondent point out to us one single realiation of these assurances? When he can I may possibly join in his poeans upon the manager. At present, in my view (and I think it

is a pretty general opinion), the management thus far is a capacity general opinion), the management to go on spending money, having confidence in the ability and judgment of the cutive, by all means let them do so, but when that except lauded for being something beyond the common run of minagement, let us know if its extraordinary characteristic brought any benefit to the shareholders. I think, Mr. Editor would do well to close your columns to all such adulation for future. The disinterested public, of which I am one, you may assured are heartily sick of hearing about the superior characteristics. is a pretty general opinion), the management thus far is a failure. If the shareholders are content to go on Redruth, Aug. 21.

NORTH LAXEY MINING COMPANY.

SIR,—Though I did not intend to take any more notice of anonymous correspondent, "Another Shareholder in North La Cannot resist the temptation of pointing out how foreibly his further letter in last week's Journal.

There is no transfer fee of any kind or description charged or the company; and, therefore, this "nice little addition to 1661," only exists in the imagination of your correspondent, assertions are even more reckless and unjustifiable than is usual annonymous complainants.

The manner in which your correspondent attempts to the company in the company of the company of the imagination of the company of the company of the company of the imagination of the company of the company

anonymous complainants.

The manner in which your correspondent attempts to wrigt of his false statement as to the "remuneration" is too content to draw attention to. He speaks of his having "omited words about as trifling in themselves as the amount they make the amount they were trifling; but I need not say that office rent and are not got for trifling expense in London, leaving out the lift for nostage and stamps.

for postage and stamps.

In his letter, which appeared on Aug. 4, he said he saw for self that the principal portion of the accounts were kept mine, which is also false; and while he grounds his compliant the expenses in London, he takes on himself to be a judge way in which the mine is worked, and speaks favourably of Novo, when his fallacies are exposed on the former point, he cound and says "we have a most excellent mine if it was a most e

Now, when his indiacies are exposed on the former point, round and says "we have a most excellent mine if it were and managed in a judicious manner. It is this last question is disturbing the minds of more than one shareholder."

J. H. MURCHISON, London Manager and Seq. August 21.

LEAD MINING IN WALES.

SIR,—Those who contend for "legitimate mining" came regard with satisfaction the insertion in the Journal of such as that from "A Welshman" in last week's Journal, having ence particularly to matters connected with the promotion company lately formed to work the Esgair-bir Mine, Cardgas A recent visit to some of the lead mines of that district havinced me that many valuable mines there are now standing for want of working capital; and there can be very little deal companies were tormed on an equitable basis or washing. companies were tormed on an equitable basis rowskin properties, and the capital raised were expended on the mi stend of being divided, as too often happens, amongst pro-that good returns of lead would be obtained, and the hear which (in consequence of such proceedings as the sear Welshman's" letter) now hangs over mining enterprise in the would soon be dispersed, and the mines again become as in the would soon be dispersed and the mi renowned as successful enterprises.

MINING IN WALES-ESGAIR-HIR MINE.

Sir.,—I notice in last Saturday's Journal a letter respeti mine signed "Welshman" in which it is stated that although possible for the mine to return a profit on 20,000l, the ide returning a profit on 100,000l is out of the question. May what authority "Welshman," presumes to make such as a bose "Welshman" know anything whatever about the presentions at the mine? By what subtle means can "Welshman" tend to foretell the amount of ore in the bowels of the eart there not many contingencies which make it quite impo define the productive powers of a mine. I learn from a wan hished some years since by Mr. Murchison that E-gairhir Mi returned immense quantities of ore right up to the surface, the lode is one of the greatest ever discovered. Again, I a wibtle means does "Welshman" employ to enable him to so know the amount of mineral contained therein? Aug. 22. A Constant Re

MINING IN WALES-ESGAIR-HIR MINE.

-Allow me to relate e circumstance in connectin wi nine. During the time Mr. Williams owned the propertyel-local endeavours I mean—were made to form a compan-hase and work the mine. With the view of forwardingsu chase and work the mine. Mr. Fryer (Sir Pryse Pryse's agent) tried to in luce the the Gogerddan estate to take shares; and although they the Gogerddan estate to take shares; and although they are in the great value of the mine they, with the proverbial slow Welshmen, deferred action. In the meantime Mr. William another purchaser. Now, Sir, I would ask is the party whosg self "A Welshman," in last week's Journal, a "disappointed Esclish". Are the grapes sour?

LEAD MINING IN WALES-MANAGEMENT.

LEAD MINING IN WALES—MANAGEMENT.

SIR,—Observing a few lines under this head in last week's Journal signed "A Welshman," calling attention to an article appeared in the Cambrian News respecting the Cambrian written by one who would seem to be very anxious that should be carried out legitimately in this county, but who intention is, probably, to do an injury to the Cambrian Muniparty, and with them the mines surrounding those properties. that this is so I will take his first remarks on Esgair-Hir. is stated: "Its history can be read with interest and profit who feel disposed to invest capital in undertakings respecting as a rule, they can obtain real information between the interest and profit who feel disposed to invest capital in undertakings respecting as a rule, they can obtain real information between the interest and profit and they can obtain real information between the interest and profit and they can obtain real information between the interest and the contract of the contrac as a rule, they can obtain no information beyond what is vo in prospectuses issued by prom ters of companies." It will less to dwell on the fact that this property is within 24 hour less to dwell on the fact that this property is within 24 nours from any part of the kingdom, and that more has been writen its former richness than any other property in Cardiganal perhaps, in the Principality. (See Waller's account, 1693) three great landed proprietors in Cardiganshirs are Lord is Col. Powell, and Sir Pryse Pryse. After some further remains that the Col. are considered in the Col. and the establishment of local companies, and work at any rise extent with local capital."

May I ask the writer of that letter to answer when the

owners in this county took any interest in the working of here? I have been here for nearly 40 years, and during that I think I can vouch for the fact that all the three great land prietors have not expended in mining 40t, altogether; and fearlessly assert that during that time only a few hundred have been expended by parties residing in the district. I have no interest in the Cambrian Mines (other than have ported on the mines for the present holders), and I am pleasorted at being able to state that not only what I have sto to the value of these mines is now being realised, but the state of the s

gratified at being able to state that not only what I have at the value of these mines is now being realised, but ground now opening out at different points of operation at excess as to value than anything I mentioned, and I may and fearless of contradiction, that the ground opened out by the company is the richest opened out in this county for the years. This, then, I would advise, that everyone interested in mines should come and see for themselves what is now being and not be frightened by what may be said by anyone restant on the frightened by the county of the many can be easily perfectly the county of the them, and, as I before stated, the journey can be saidly and it will be to their interest to do so instead of listening ments emanating from whatever quarter and from where may find vant.

The ore ground already laid open and in sight is suffic a large percentage on the capital of the company (10,000k), a or the case, was Mines have Lisburne Min The put in a few in in a few in a few in a few in profi

a few years, and for 38 000 te of pearly 1. Thy should not they are so, then the min where the serichest p shire; and i stands at.

may quite un he about their he, who may resed by me. perso of henefit hey with, An

to render the meding purch

PARYS M

In Parys

uld augur a rel, and wit in the sett, to take up Morfa Da Mai

think that is to att

GREAT

FLAGSTAF ject of his ed against t

subsection of the Cambrian Mines be worth 100 0000 is the Jam's proposed on the Cambrian Mines and others, to get a fair price for their proposed of the parchase money of the Lisburne Mines was 5000. The parchase money of the Lisburne Mines was 5000. And make the parchase money of Goginan was 30. And make the parchase money of Goginan was 30. And make the second of the parchase money of the pa

of 5300ks, in a case of the control of the control

of no detains of the plants are open for inspection, and, therefore, consulty, as the mines are open for inspection, and, therefore, consulty, as the mines are open for inspection answering any restricted them unless they should emanate through a share-is about them unless they should emanate through a share-is about the mines from that is, who may hold a different opinion of the mines from that is, who may not not for the sake of issuing statements for the mines of the efficient of of the e

PANT-Y-MWYN MINE, NORTH WALES.

PANT-Y-MWYN MINE, NORTH WALES.

Having recently noticed in your widely-circulated Journal moders upon this subject. I beg to say a few words, prompted of the mine during a recent visit to North mosal examination of the mine during a recent visit to North mosal examination of the mine during a recent visit to North mosal examination of the mine in the modern that is a property of the subject of the modern and develope the resources which evidently many to extend and develope the resources which evidently this mine; but, as one of your correspondents very fairly is subjing has been done to puff its various advantages—in modern that in all probability enough has not been under the Pant-y-Mwyn more generally known in Liverned the larce-entres of commerce, by the circulation of producter larce-entres of some send as form a basis of attractions to invest in what will doubtless prove a safe speculation, which might form a guide spinof that the company feel assured the results to be oblimated continued exertions will after a time prove the momendation to the public in their favour, and hence secured to be a proposed the selections of the summendation to the public in their favour, and hence secured to the proposed of the summendation to the public in their favour, and hence secured to the summendation to the public in their favour, and hence secured to the summendation to the public in their favour, and hence secured to the summendation to the public in their favour, and hence secured to the summendation to the public in their favour, and hence secured to the summendation to the public in their favour, and hence secured the summendation to the public in their favour, and hence secured the summendation to the public in their favour, and hence secured the summendation to the public in their favour, and hence secured the summendation to the public in their favour, and hence secured the summendation to the public in their favour, and the summendation to the public in their favour, and the summendation to the public in thei their continued exertions will after a time prove the gendation to the public in their favour, and hence secure and chareholders desirous of remaining incorporated in a grain-paying transaction, instead of those shifting intended in the public proving without any fixed object. subboften met with in various speculative companies, who instansferring and re-transferring without any fixed object should working and grasping spasmodically at the most purpose. It is a spasmodically at the most purpose in the secure positive Panty-Mwyn Company, the excellence of their future at and the earnestness of the efforts of those forwarding threats, I conclude by wishing them every success in their laing—Aug. 18.

V. S. P.

PARYS MOUNTAIN AND MORFA DU MINES.

PARYS MOUNTAIN AND MORPA DU MINES.

a-la Parys Mountain Mining Company, the 90 cross-cut is besting more sulphurous and easier for driving, and the former wild argur well for a large boty of copper ore ahead and ctuse hemarkebe advantages set forth in the prospectus of the lifts Du Mining Company are rarely to be found in new company are the lifts Du Mining Company are rarely to be found in new company with a splendid market for the produce at very remire prices; an engine erected; a small sum of money only and be required to develope this property (about 1000L) Now min money is given, and apparently enormously rich copper in the cett, which is vast, rich, and extensive, heing no less Maces. This property offers every desirable feature, and the shading he emium. The calls are small and made easy—made being also very limited in amount. The mine could be menangm p emium. The calls are small and made easy—
idd being also very limited in amount. The mine could be
instituight, and in three weeks it is stated that the rered commence. Under the white rock it is believed that
poils of copper ore exist. It is in contemplation by certain
to take up all unsub-cribed shares: this speaks much for
offall time is expected to become.

GREAT WEST VAN MINING COMPANY.

We hear from time to time of American deceptions and of not the promoters of American mining companies. I take that managers of some British mines may be tarred same brush. Here in this Great West Van Mining some brush. Here in this Great West Van Mining planeholders were recently startled by news of a petition so; then comes a circular from the directors to say that this gue was unnece-sary; now another circular to say the pisheing wound up, and a liquidator ready to sell the light want to know is, why has no meeting of the light been called all this time? Are the directors afraid them? Only recently a large sum was subscribed on presense. What has become of that money? To what are shown to the subscribed on the start butter this "cut and dried" plan of stopping all bloss as to pest management? I should like to know how the sumanaged to pay dividends in the first two years of the pray, Sir, lend the assistance of your widely-read high the matter enquired into.

A SHAREHOLDER.

MAGSTAFF SILVER MINING COMPANY OF UTAH.

Aletter from Mr. Sykes, solicitor to Mr. Erwin Davis, on caster from Mr. Sykes, solicitor to Mr. Erwin Davis, on which he had a band-mment of a Chancery suit which he had adjust his shand-mment of a Chancery suit which he had adjust the Flagstaff Company for recovering an alleged the properties of 80,000%, published in last week's Journal, figuries to misconception, and although my board declines kind any newspaper controversy with Mr. Sykes, they wish tate for general information that the action in the Lord Marking for Solician to the point out that suitors having a for general information that the action in the Lord this for 5000, and to point out that suitors having a for 80000, do not usually abandon their suit for the litating the discussion of a claim for such a comparasum. The Flagstaff Company have a set off to this mof Mr. Davis, and have within the last week put in imfor recovering from him all the profits he has made magful possession of the mine, as well as for a return emble pertion of the money received by him from the sa purchase-money, on the well-known equitable may enforced by the Court of Appeal. purchase-money, on the well-enforced by the Court of Appeal.

THE COLORADO BEETLE.

ct.
chan have
am please
have sta
i, but the
ation are

nay and de by the parties of the largest of the lar

where

000%), 88

A-Penaps a notice of the Colorado beetle may not be con-deut of place in your universally diffused Journal; if so, I spring one for the press, which I shall be glad to place at links part work. In the interior, should any of your correlames sext week. In the interim, should any of your corre-tion or subscribers like to inspect a specimen I shall have a passes in exhibiting it at the address appended.

WM. WHITE,

WM. WHITE. Tod Away Office, West street, Finsbury-circus, Aug. 23.

au-Regires.—In the last seven months the value of straumerjorted was 1.142,6124.; in the same time 1876, 1,124,5404.

Takinan Palam Car Company has declared a quarterly divi-

te of 8 per cent, per anum.

One of Lawe's Chamical Manure Company recommend a leyer ended June 30 last of 8 per cent., carrying forward 11,92%.

has been presented for the winding-up of the Investors'

Since again the Gallydeg Colliery Company (in liquidation) when is to the efficial liquidator, Mr. Jas. Waddell, at his office, Mansion allasies, or or before the 31st inst.

Eleetings of Bublic Companies.

RICHMOND CONSOLIDATED MINING COMPANY.

The adjourned general meeting of shareholders was held at the Cannon-street Hotel, on Thursday,

Mr. JOHN ELLIOTT in the chair.

Mr. HUBERT AKERS (the secretary) read the notice calling the meeting.

Mr. Hobert akers (the secretary) read the house cannot the meeting.

The Chairman said, as he had no doubt they were all very anxious to hear the news which had been received that morning, he would depart from the usual course of proceeding, and at once read the telegrams which had been received. Two had come in that morning, one from Messrs. Wilson and Wren, the company's eminent counsel, and the other from Mr. Probert, as a sort of commentary on the first. The telegram from Messrs. Wilson and Wren read thus — "Court has announced generally its decision against us, denoting finding of facts and law not settled. We believe there are sufficient errors to reverse in Supreme Court." That, as he had said, was signed by the company's two eminent counsel. The telegram from Mr. finding of facts and law not settled. We believe there are sufficient errors to reverse in Supreme Court." That, as he had said, was signed by the company's two eminent counsel. The telegram from Mr. Probert was:—"Decision against law and facts. We hold possession during prosecution of appeal." And then there was this addition to the telegram—"The ore above the 4th level rich, and quality increasing." The expression "denoting" was used in the sense of inti mating or pointing out, so the Court left the company in possession of the property during the prosecution of the appeal. The shareholders must form their own opinion as to what the telegram meant. The telegrams generally came over very short, leaving the directors to supply, by their own common sense, the obvious meaning. The impression conveyed to his own mind was that the Court had intimated the finding of facts, and the law was not settled, and the counsel said they believed there were sufficient errors to reverse the decision in the Supreme Court. He had always warned the share holders that they must not expect to get a favourable deci ion in a local Court, or from anything -ave an appeal. If the company's case was good, as undoubtedly it was, they always had that chance, and he thought the shareholders might rest fully assured that the appeal would be in the company's favour. So far as he had himself studied the case he could not conceive a verdict being given against the company in the Supreme Court. However, he would not comment upon the case; each shareholder must form his own conclusion. It was a very mortifying case, but he would recall to their recollection that when he met them in 1873 the directors had a worse case to bring to the notice of the shareholders. At that time the company stood in infinitely greater jeopardy than now, but they fought that battle through very successfully. He believed it was not the custom of Englishmen to despond at any slight reverse of this kind. They must expect it in all human affairs; and he had no doubt that if

jorning to the notice of the shareholders. At that time the company should in infinitely greater journed that battle through very successfully. He believed it was not the custom of Englishment to despond at any slight reverse of this kind. They out to expect it in all tutana affairs; and he had no doubt that if the speak of the street o

companies outlet to de, but what they did do. The law had conceided contains the companies could put on prohibitory rates to favour their own coals. Ho sould the companies could put on prohibitory rates to favour their own coals. Ho sould print out a case in which the otherway was first times as great as in other cases, so provided the property of the property of

counts. The property of the state of the sta

greatly obliged if the Chairm in would, in a row wor is, state the example, the company, and its prospects for the future.

EMAN: Well, you have put a very wide question to me, and one that I rable responsibility in answering. I may tell you this much that the suts our reserves pretty much in two—the former reserves; it passes used in the centre of the Potts chamber, out it also cuts the work and the potts of the potts chamber, out it also cuts the work. injunction cuts our reserves pretty much in two—the former reserves; it passes nearly through the centre of the Potts chamber, out it also cuts the work for development in two, so that while that injunction exists unless we go to the expense of fresh exploration works a good deal of that reverve is hardly accessible to us. But, as I have already told you, Mr. Probert considers the new discoveries in the mine to be of sufficient importance to justify starting the furnaces on Sept. I, and I gather from his telegram that they are still improving. Therefore, we now intend going on new ground, leaving the other workings in abeyance for the present. Now, you must not imagine that the 50001, incurred at the time of making these accounts was the whole of the cost incurred—that sum I have no doubt will be doubled by this time. Hence it is such a dreadful thing for both sides legal proceedings in America, and which is, I hope, one of the things that send to prevent parties going to law. But I do not apprehend in the event of our appealing that this cost will be very much increased, because I understand the Supreme Court at Washington will sim-ly take the facts before it, and will not require witnesses to be produced as at the first hearing. Therefore we have virtually incurred the main cost of the future appeal. Now, it is well for you all to understand completely what the law proceedings really are. I know that many shareholders imagine that we had notices of suits very long before they existed. There were some rumours, but there was no sait in the sense of law proceedings other than protests against the patents we had applied for. Those proceedings other than protests against the patents we had applied for. Those proceedings other than protests against the patents we had applied for. Those proceedings that the very long that the submy and the submy were of no moment, they did not atteen any importance to them, they were mere forms. But the injunction was a more serious matter, and the only sait that we have had to figh

points connected with it, are made to depend upon this suit. And, therefore, it is an additional reason weighing upon my mind why I attach so much Importance to the fact that the Gourt leaves us in possession of this property, which I think they would in all probability have obtained, good of this property, which I think they would in all probability have obtained, good of the property, which I think they would in all probability have obtained good of the property and that the whole has, his form. Our first that way is a very encouraging facture for us, and had the whole has, his form of the fature of the company, and in doing so testified to the real and ability with which that gentlemen had discharged the duties of his office.

Mr. However: Gentlemen, the fact the duties of his office.

Mr. However: Gentlemen, the fact the state of the company, and I am quite same meanty—m. Romourarry briefly acknowledged the complicant.

Mr. However: Gentlemen, the fact the state of the state of the very ment appreciated by min the they will be the state of the company and I am quite same has had for several months past since this trial commenced that your sympathy with him to-day will be very much appreciated by him. (Hear, hardy regard increasintly in obtaining the evidence of the best experts and professional writenesses that and could possibly be obtained, and also the best course. The decision which we have heard to-day I am quite sure has not been arrived in from We have heard to day I am quite sure has not been arrived in from We have heard to all sides that our counsel were the best of the best in the land, and that our will reason that the country of the last six or seven months during these law proceedings but for the last six or seven months during these law proceedings but for the last six or seven months during these law proceedings but for the last six or seven months during these law proceedings but for the last six or seven months during these law proceedings but for the last six or seven months during these

dictor on the board.
Mr. Tarshoo, desiring that the proceedings might be characterised by as perfect
nanimity as possible, deprecated the raising of any question as to the Chairman's
drawnen.

thement. Mr. BROUGHTON saw no objection in stating that by the Articles of Association is number of direcors was fixed at seven. There were already six, and Mr. Pul-

namimity as possible, deprecated the raising of any question as to the Chairman's pairement.

Mr. BROUGHTON saw no objection in stating that by the Articles of Association the number of directors was fixed at seven. There were already six, and Mr. Pulbrook's nomination completed the maximum.

Mr. W. CUTHEREN: Gentlemen, I must thank the directors most cordially for the courtesy and kindress they have always shown to me, and the Chairman in particular, upon every occasion that I have called at the office to make enquiries. The only thing I have to complain of is this matter of the engineer, and that has been explained away satisfactority, and therefore I must say that my feeling towards the directors is of the most friendly possible character. (Hear, hear.)

The resolution was then put, and carried unanimously.

Mr. Pulbrook: Gentlemen, I have to thank you for the honour you have done me by electing me a member of the board of this company. I only hope I may do my duty as a director, and that on the next occasion when I have to meet you as a director sitting behind the table we may have a very excellent report and account to submit to you. (Hear, hear.) I will not detain you, but, as a lawyer, I may express an opinion on the telegrams received to-day. I do not think there has been a legal decision come to, and for this reason. By one of the telegrams we are told that we are still to remain in possession of this disputed ground. Now, if the verdict were deliberately for the Eureka Company, they would be entitled to the possession of this disputed ground by virtue of the judgment. As I look at the telegrams it looks as if the judges did not like to come to a decision, but express an opinion in favour of the Eureka Company, they would be entitled to the possession of this disputed ground by virtue of the judgment. As I look at the telegrams. Gentlemen, it is my intention to do so as soon as these proceedings to the legence of the telegrams. Gentlemen, it is my intention to do so as soon as these proceedings to do t

watch every thing so closely that I could never feel that there was leisure for me to get away all the time that we were in an abnormal state during the whole of those five years. I was in hopes to-day to have had such favourable news to announce to you that I could have gone more fully into details that I was anxious to discuss with you, but we are still in the throes of a lawsuit, and, therefore, it would be very unwise for me to open my mouth upon matters that might compromise us, or tend to create disunion, when it is so especially important that everybody should put their shoulder to the wheel, and ald in extricating your company from its difficulties. Although I shall retire from you officially my services will be always at your disposal. I have studied the mine, and every fact in connection with its past history, and I have also studied American law in connection with it so losely that I may be able to render you some assistance in the future. I have just the same fondness for the Richmond as a salior has for his ship, and I shall never cease to take a deep interest in its welfare. I never heard of the Richmond until I saw a prospectus which was shown me with the names of certain members of the board printed on it. I never saw it until that time, but from that time I have been most intimately associated with it, and I think I may take some credit to myself for the success that has attended it. (Hear, hear.) At all events, I have been incessant in my attention to it, and in thinking day and night what would be the most successful course to pursue in conducting its affairs. Hence it is with great regret that I have to bid you good-bye, and I do so thanking you for the proof of confidence you have reposed in me. (Applause.)

Aff. BRIDGEWATER expressed his deep regret at learning the decision of the Chairman relative to his retirement from office, and at some length unged Mr. Elliott to retain his position on the direction of the company. He concluded by moving "That the cordial thanks of this meeting be giv

us to the interest of the company were the Chairman to retire at

nch a critical moment.

Dr. Bisnov also strongly urged the Chairman to reconsider his decision, being fathe same opinion as that expressed by the last two speakers, that Mr. Elliott's etirement would materially injure the interests of the company.

Several other shareholders joined in, expressing regret at the determination of he Chairman, and in requesting him to withdraw his resignation.

Mr. Baylists considered it was particularly selfish on the part of shareholders of the constant of the part of shareholders of the constant of the constant his position when he had assigned ill-health as he other reason for taking that course.

Mr. BROUGHTON confessed to being one of the selfash ones, and besought the Chair and to retain his seat until the company had surmounted its present difficulties. After some further remarks of a similar character the resolution was put and arried unanimously and loud cheers.

The Chairman, who spoke with considerable emotion, said he would re consider is decision.

The CHAIRMAN, Was possess which considered were the prospects of an appeal to the Supreme Court, said that unquestionably very great delay would be involved in such a course, the Court of Appeal at Washington being more than two years in arrear of its work.

EXTRAORDINARY MEETING.

an appeal to the Supreme Court, said that unquestionably very great delay would be involved in such a course, the Court of Appeal at Washington being more than two years in arrear of its work.

EXTRAORDINARY MEETING.

The CHAIRMAN: Gentlemen, we will now commence the business of the extraordinary meeting. You are all aware, because you have all had copies sent you, of the intentions of certain requisitionists to bring forward a matter as to the appointment of a committee of enquiry and sending out certain gentlemen to be selected to America to investigate the affairs of the company. I may say that it has always been the policy of this board to ask every shareholder to come and enquire for himself, and everything has been thrown open to the best of my belief in the most ample way to those who have enquired. I believe that the result has always been that whenever our accounts have been examined they have been found to bear the test, and that those who have come in that way to enquire have gone away satisfied that the fault, if any, did not rest with the board. We, therefore, always court enquiry, and we do so now. Henoe I hope that we shall come to some resolution to-day that will tend to satisfy you that the affairs of the company will bear the closest investigation, and that we may all agree in the appointment of a committee to satisfy yourselves upon all points of the concern. It is quite right that shareholders should examine into their affairs. I believe that many companies go down because they do not, for everyboly at times wants a spur to keep them up to the mark. I for one should rejole to see the close of the enquiry into everything that has occurred since the comment of this company, and, therefore, without further comment, I leave those gentlemen who have made the requisition to communicate their motives and intentions to you.

Mr. W. OUTHINSET: Gentlemen, as my name stands about head of the requisition to communicate their motives and intentions to you.

Mr. W. OUTHINSET: Gentlemen, as my name stands

for the appointment of a committee of enquiry, he doubted whether the meeting would be equally unanimous in handing over to the committee full and unrestrained authority with which to proceed to America for the purpose of instituting reforms.

Mr. HOPKINS: The shareholders will be notified that the resolution as now proposed differs very materially from that which was sent round in the circular by the gentlemen who signed the requisition; and I may as well say that this resolution as now submitted is the result of a conference between the requisitionists and the directors, and that we have agreed, with your sanction, to accept this. I think it is only fair to state that. I, for one, am bound to say that the proposition as it first emanated was very objectionable, and so far as I have any influence I should have strenuously resisted the passing of such a resolution. However, as the requisitionists have considerably modified it, I for one have no objection to it as it stands. I am sorry that Mr. Tendron should rather start a hare by talking of upsetting Mr. Probert; that is not the object or intention of this resolution at all. The intention of this resolution and of the requisitionates, so far as I understand it, its osee not if we can upset Mr. Probert, but to add and assist him in reducing the working expenses, which are enormous, and which are eating up all our profits. If we can do that I am sure that Mr. Probert will be the first to rejoles, and will cordially co-operate with any committee in arriving at that end. (Hear, hear.) The requisitionists were kind enough to insert my name in the first circular which they issued. I believe my co-directors, one and all, were glad to see that, as it showed—which was the intention—that there was no hostile feeling against the board. But I wish to tell you this most distinctly, that my name appeared in that circular without my consent having been solicited; I believe the requisitionists will admit that I was totally ignorant of the fact that my name appeared in that ci

coperty.

Considerable discussion followed, in the course of which Messrs. Tendron, Bridge-sater, Cuthbert, Hopkins, and others, again addressed the meeting, each urging the views respectively entertained. Eventually the resolution was put to the vote and carried.

otion of Mr. CUTHBERT, a vote of thanks was accorded to the Chair-

ARGENTINE COMPANY.

The first annual general meeting of shareholders was held at the offices of the company, London Wall, on Tuesday,
Mr. S. LLOYD FOSTER in the chair.

Mr. JOHN E. DAWSON (managing director) read the notice con-

ening the meeting.

The CHAIRMAN said the report contained the greatest possible amount of information. As far as the directors went, the property had been worked in the most economical manner, and with the greatest amount of care and caution. No doubt in the old com-pany there was a considerable amount of difficulty in getting the gold out of the ores. The ores were more difficult to work than mecessary to send out some calcining apparatus. At the meeting in March last the directors informed the shareholders that they had March last the directors informed the shareholders that they had sent out an Oxland's calciner, and he had pleasure in announcing that Dr. Oxland was present to-day, and would be happy to give the shareholders the fullest information as to what his son, Mr. Charles Oxland, said was necessary to get gold out of the mine. The amount of money which was wanted was not large, but they were on their beam ends, and had to borrow money to send out the calciner, and he would presently mention the form in which it was proposed to raise the money. It would be in a form which would make every shareholder wish to subscribe; and if the reports which were received were realised at all, there would not be the slightest doubt that this would be one of the finest paying mines they had ever that this would be one of the finest paying mines they had ever come across in the mining world. The word "Gualilan," the name of the property, signified the "land of gold." No doubt in former of the property, signified the "land of gold." No doubt in former times the property yielded enormous amounts of gold to the native miners, who were unable to treat the gold so efficiently as the present company. From the reports which had been received the directors thought they could develope the property with an amount of 15,000l. of working capital, but it had been found impossible to do so, owing to the difficulty of treating the mineral, which

was, no doubt, rich. The reports were to the effect that a wind deeper it got richer and richer. An entimosa amonation of value there was no doubt. It doubt worker, so as to the stuff was there, and the question was simply a matter of a stuff was there, and the question was simply a matter of a stuff was there, and the question was simply a matter of a stuff was there, and the matter of extraction simply involved a few them of the company of the stuff was a first-class miner. At the present moment going on as the pans, apart from the present machinery, they doubt be easied obtain considerable amounts of gold, and pay dividends. Mr. Oxland estimated the return would be 70 per cert, and the everything to show that it was not at all improbable. Capt to at as reduction officer, and the directors considered he wasta his position as a good reduction officer and as practical ma. In property could not possibly have got. Mr. Oxland, Mr. Oxland, his position as a good reduction officer and as practical ma. In proposed to raise money was by issuing 10 per cent. Stuff proposed to raise money was by issuing 10 per cent. Stuff proposed to raise money was by issuing 10 per cent. Supply a count, giving the holders the option, for a space of two year, Sept. 1, 1877, of converting the nominal amount absurd to small amount, considering the company's property citemed some 27 square miles, and the advantage of such a small count, giving the holders the option, for a space of two year, Sept. 1, 1877, of converting the nominal amount and shared counts, giving the holders the option, for a space of two year, Sept. 1, 1877, of converting the nominal amount and shared counts, giving the holders the option, for a space of two year, sept. The property was a company and the debentures, which might afterwards be evaluated to the company and the space of two years, sept. 1, 1877, of converting the nominal amount and the space of two years, and the space of the property and space of the property shade and the space of two years, and the space

PESTARENA UNITED GOLD MINING COMPANY.

The ordinary general meeting of shareholders was held ffices of the company, Queen-street-place, on Tuesday, Mr. W. W. FISHER in the chair.

Mr. W. H. Rowse (the secretary) read the notice conv

Mr. W. H. Rowse (the secretary) read the notice convenimenting. The reports and accounts were taken as read. The CHAIRMAN expressed his regret at the absence throness of the Chairman of the company—Dr. Quin—and also described to the company. At the last moment of the Chairman of the company. At the last moment (the Chairman) had been asked to make such a statement shareholders as circumstances required. The reports which been placed in the hands of the shareholders, and which doubt been carefully perused, would have informed them the shareholders as circumstances required. The reports whe been placed in the hands of the shareholders, and which doubt been carefully perused, would have informed them the far as the prospects of the mine were concerned they were in satisfactory state indeed, and he might say that at the present ment the prospects were more satisfactory than they had ere at any previous time. From the Val Toppa Mine alone during present year the returns had quite equalled the expectations were originally held out, the mine having yielded 2427 ors. of averaging nearly 12 dwts. to the ton, which was near I dwt. the average of the previous year. They were, therefore, in helieving that the vains were gradually improving, as held hoped. The accounts submitted showed a profit of about 3506, the working of the Val Toppa Mine alone. Circumstances with the shareholders were familiar having prevented the works a tarena being pushed on with the energy which should have bestowed on them; and, therefore, up to that time nothing been derived from that mine. The shareholders were also that there was a large amount of ore at the Val Toppa Mine, owing to the cost of transporting it to the reduction work too poor to treat, but arrangements had quite recently been would leave a good profit. The ley of this ore was about to make a good profit. The ley of this ore was about to make a good profit. The ley of this ore was about to make a good profit. The ley of this ore was about to make the cost of the cost of the profit of the ton. The directors had been enabled to make which would enable them to ornig the would have a good profit. The ley of this ore was about of gold to the ton. The directors had been enabled to make tract with a gentleman on the spot to erect the necessary at the profits of the working and the business returns, &c., for him the profits of the working and the business returns, &c., for him the profits of the working and the business returns, &c., for him the profits of the working and the business returns, &c., for him the profits of the working and the business returns, &c., for him the profits of the works at a very friffing cost. There was not find the present. At Pestarena the works had been pushed on as rapidly at the work of funds had prevented such an energitio working as cost but the wont of funds had prevented such an energitio working as cost but the wont of funds had prevented such an energition working as cost but the wont of funds had prevented such an energition working as cost and at this point the ore was of a better quality than in any part of he and at this point the ore was of a better quality than in any part of he would improve in depth, and nothing could be more converging than the would improve in depth, and nothing could be more converging than the would improve in depth, and nothing could be more converging than the would enable them to get the ore up at a very low rate indeed, as shaft would be very considerably increased by the completion of the profit would be very considerably increased. It would have be very considerably increased. It would have be the returns would then be very considerably increased. It would have been pushed on as fast as possible, as there was an unlimited amount of being pushed on as fast as possible, as there was an unlimited amount of the pushed on the pushed on the second of the pushed on the pushe The directors had been enabled to make

-exam desired object.
that would, pe
goe on for a
thing of the n

facilities

nion being I dly survey th rel-the of gold to th was very ri

fire third thing which had to be considered now was the financial for the property of the company. The shareholders were aware that during the last two of the company had passed through a period of very great difficulty, and the company had passed through a period of very great difficulty, again the company had passed through a period of very great difficulty, again the company had passed through a period of very great difficulty again the company had passed through a period of very great difficulty and the company had passed through the company had passed through the company had been obliged in order to save the state of the company that the company the property for one year, and that the directors hoped to renew, the company on which the loan would be renewed was that it should be company to the company the present of the company that the property for one year, and that the directors hoped to renew, the company the present of the company that the property is stated to the company that the present of the company that the present of the company that the

systa to what might be the effect of that meeting. As member with a toward and the similar would recollect, the firm of which he was a member belief would recollect, the firm of which he was a member belief would recollect, the firm of the company were in considerable difficulty. They first of the company were in considerable difficulty. They first be still the side of the examination of persons in whom stated themselves by the examination of persons in whom stated the same of the properties, and spent nearly a month is firm—examined the properties, and spent nearly a month is firm—examined that properties, and spent nearly a month is firm—examined the properties, and spent nearly a month is firm—examined the properties, and spent nearly a month of making limits from the result of that examination was to in-pire his brother hards and the second of work would be required in order to effect his would, perhaps, have been called the mismanagement that would, perhaps, have been called the mismanagement that would, perhaps, have been called the mismanagement that will of a long time in any respect except as to the technical results of the mines. It was found that the Val Toppa Mines arternely simple case of mining, as the mines were situated the montain, where each successive level went below the matering the mine, and at the same time affording all the matering the mine, and at the same time affording all the matering the mine, and at the same time affording all the matering the mine, and at the same time affording all the matering the mine, and at the same time affording all the matering the mine, and at the same time affording all the matering the mine, and at the same time affording all the matering the mine, and at the same time affording all the matering the mine, and at the same time affording all the matering the mine, and at the same time affording all the material the mine. possible means of economical working, and this was only silva very simple though a costly work—the bringing down in the surface to the bottom of the mine, the sing parallel to the dip or shoot, as it is called, of one bingst and richest deposits of ore in the mine, and it was ally surrey that this work might be done within a certain adme, at a considerable expense, but at an expense that was retified by the evident richness of the mine. He had himself at the mine, and he had seen broken from below the then alwell—the 80 fm. level—ore which had upon analysis yielded adjed to the ton of ore, and the average of the whole excasus very rich, being between 2 and 3 czs. to the ton. The twa projected so as to fall exactly at the deepest point of the Inselat was to be fitted with railroads worked by a water-this state was to be fitted with railroads worked by a water-this state was to the mine. There was another very great change it was found necessary to make. The ores from the mines he conveyed by all sorts of contrivances, including wire-sidge-roads, on men's backs, and so on, down to the establishis the found necessary to make. The ores from the mines is it was found necessary to make. The ores from the mines is it was found necessary to make. The ores from the mines is conreged by all sorts of contrivances, including wire-spiele conde, on men's backs, and so on, down to the establishing is the series of the works. There was no reason why the ores is Battiggio, several miles distant from the mine; this mode sping he ore had eaten up a great part of the value of the ores, which were spin the crude state to the works. There was no reason why the ores is the traide on the spot, for the carriage of ores in a crude state was an assumer. It was, therefore, proposed that reduction works should be put the sent of the inclined shaft, and the estimates for this work had been as in the men reports. The estimates had been, as engineers estimates it forms reports. The estimates had been, as engineers estimates if the sent in the sent in the sent in the price of materials and machinery had affected in the alluvial deposits, which could not have been anticipated, and, this, the increase in the price of materials and machinery had affected in grat extent. Apart from this, the original estimate had only been solved which was fully accounted for by the expense of sinking through its past extent. During the years that this expenditure had been going is set work of bringing down the inclined shaft to the 100 fathom level is exomplished, and the lowest print was the richest in the mine. In qualities different the sent of the sent price of the sent

PANY

as held

contented?—The SECRETARY said it was about 82 per cent. on the se, continuing, said at Pestarena they had adopted precisely the same at in me at the larger works at Pledimulera, at which the Yall Topa deed, which consisted in the employment of the Frankfort mill, in the se expeditions as some other mills, gave a very satisfactory [add. There were now 12 mills in operation at Peschiera for treaty the process adopted at Val Toppa, and 14 other mills were being in when completed, would largely add to the profit. All these things be by the aid of the money which was reported to the shareholders having been obtained from the Bank of Alessandria, but this money if within a certain time. The directors had been able to arrange that at the should not be required in less than four years, but to secsion they were obliged to agree to pay off during this year four social many the secsion of the requirements, their representative, Mr. Franzi, typon the coses of their requirements, their representative, Mr. Franzi, typon the company as before. The bills until lately were readily at large the second of the requirements, their representative, Mr. Franzi, typon the company as before. The bills until lately were readily at large the second of the requirements of the state of things and consequently they had to be provided any large extent, and had actually padd upon them; and up to that the should be most. (Hear, hear.) It is second to the large that the should be some the same would be barely sufficient, but het thought sufficient many, because if the bills due in September were not met the company, because if the bills due in September were not met the company. se. This sum would be barely sufficient, but he thought sufficient any, because if the bills due in September were not met the cominio bankruptay, and the mortgages would naturally step in and the whole concern. The security for the second mortgage bonds reases the property had been valued at 38,0001, before the Bank of the advance. The bonds could be issued in amounts as low as 251, sasist. A shared with this gentleman that the odds should be reduced. He agreed with this gentleman that the odds should be reduced. He agreed with this gentleman that the bends for too highly; but when, in 1870, his firm took the comman that the paid for too highly; but when, in 1870, his firm took the the comman that the paid for too highly; but when, in 1870, his firm took the comman that been cut down to 15401, a reduction of 15301, per annum. Since such that been cut down to 15401, a reduction of 15301, per annum. The second of 15301, and 15301, an

the whole amount of the second mortgage bonds. Their present prospects in regard to profits were very satisfactory; since the accounts were made up the returns had been 337% cox. In April, of the value of 1293%, or a profit of 225%. In May the produce was 380 cox., giving a profit of 479%; in June the produce was 386 cox., and the profit 379%; and in July 374 cox. were returned, and the profit was 331%. In conclusion, he (Mr. Taylor) suggested that the shareholders should form a committee to urge their fellow-shareholders to subscribe towards the debentures, and thus save the company.

Mr. H. SWAFFIELD fully concurred in all that the Chairman and Mr. Taylor had stated as to the absolute necessity of at once finding the 300% required to save the company. He then referred to the case of the Upper Assam Company, of which he had been an auditor for 14 years. In 1867 the shares fell to 6d. each, but by the issue of mortgage bonds the position of the company had gradually improved, and the shares were now quoted at 6%. He was willing to contribute 50% towards the debentures.

but by the issue of mortgage conds see position of siccompany has generally proved, and the shares were now quoted at 6%. He was willing to contribute 50% towards she debentures.

Licut.-Colonel Perguval said he would subscribe 100%.

Mr. R. TAYLOR remarked that the company was free until the middle of September, when bills for 750% would have to be met.

Mr. Hill asked if the 10,000% were not subscribed how would the director get on for their money?—Mr. TAYLOR said the directors had risked their money, but the money of the shareholders who had subscribed had been placed in trust at a separate bank, and would not be touched unless the whole amount were subscribed. (Hear, hear.)

Mr. W. S. Poole thought the directors had acted very honourably and very handsomely in this matter. (Hear, hear.)

The Secretary said, in reply to Mr. Hill, the total liabilities were 18,76%, in cluding the bank loan.

Mr. Hill expressed his opinion that the effect of the arrangement now being made for raising the ore would save the company a deal of expense and trouble.

The report and accounts were then adopted unanimously.

On the motion of the Chairman, seconded by Mr. J. O. Goodman, Mr. F. F. Quin, M.D., was re-elected a director; and on the motion of the Chairman, seconded by Mr. Poole, Mr. R. Taylor was also re-elected a director.

On the motion of Lieut.-Colonel Perguval, seconded by Mr. Goodman, the auditor was re-appointed.

A resolution, proposed by Mr. Hill, and seconded by Mr. Poole, was spassed appointing Lieut. Colonel Perguval, Mr. Swaffield, and Mr. Arthur, with power to add to their number, a committee to canvas the shareholders for subscriptions to complete the issue of the second mortgage bonds.

The meeting then terminated with a cordial vote of thanks to the Chairman, directors, and managers.

ENGLISH AND AUSTRALIAN COPPER COMPANY.

The half-yearly general meeting of shareholders was held at the

The half-yearly general meeting of shareholders was held at the Cannon-street Hotel, on Thursday,

Mr. R. A. ROUTH in the chair.

Mr. C. B. ROGERS (the secretary) read the notice convening the meeting, and the report of the directors and accounts, giving estimate of profit and loss, were submitted.

The CHAIRMAN explained that this was the balf-yearly meeting, and, therefore; the directors had merely to inform them what progress had been made, leaving the precise details to be supplied at the annual meeting. During the period reported on 7616 tons of ore, regulus, precipitate, and rough copper were received from various mines, as against 7662 tons in corresponding six months of the preceding year; while the quantity of ore, regulus, and precipitate smelted at Port Adelaide and Newcastle works was 5904 tons, as against 6758 tons. They made 1183 tons of copper, as against 1393 tons, and the quantity of copper shipped from and sold in Australia was 1171 tons, against 1384 tons. Passing to the net return from the company's wharf at Port Adelaide, which was 1688L, against 2437L, he would explain that the falling off was through the necessity of repairing the old portion of the wharf, which had been erected for 26 years, and was no longer in a proper condition to accommodate the heavy work that had to be done. The whole had now been completed, and by recent advices they learned that full business had been resumed. There was abut one other point to which he need pleted, and by recent advices they learned that full business had been resumed. There was but one other point to which he need direct attention. There was adebit balance of 66201, and he thought he might congratulate them that it was no larger. He had told them in February that war would not adversely affect prices, and had this country been involved in the war it would not, but he was glad to say that we had avoided it, and although one of our best cushad this country been involved in the war it would not, but he was glad to say that we had avoided it, and although one of our best customers for copper had been temporarily taken away, he believed that keeping out of the war would be to the ultimate advantage of them all. He believed in the month of February that they were at the bottom of the market, yet there had since been been a further fall of 2l. per ton. This was a matter beyond their control, and he was, therefore, glad their loss had been no greater, as it certainly would have been but for the great care they had taken to avoid it. At present there was very little doing in the market, and the future was a complete cloud. He might, however, tell them that in the opinion of those well versed in the copper market we have now really seen the worst, and there is a good prospect of the market rallying. He believed the next six months' operations would enable them to write off the loss of the last six months, and in the present condition of affairs, to promise more than that would not be justifiable. With reference to the low price of Burra copper in the market, the feeling that it was too low as compared with Wallaroo was general, and he noticed that it was specially referred to in the market report of the Mining Journal last week, it being there remarked "That Australian prices have been quoted slightly higher, but the great difference between Wallaroo and Burra, to which we have before referred, has not yet been properly adjusted, and it is a most extraordinary thing that buyers should be so dilatory in availing themselves of such a considerable advantage which Burra shows over that of Wallaroo. The price of the former is marvellously cheap in comparison with that of the latter, as a difference of 5l, per ton is preposterous, as it is only of comparatively recent date that the average difference has been so very excessive, and it is perfectly unaccountable. The Burra brand we believe is in every respect equal to its former expectation, and has always been fectly unaccountable. The Burra brand we believe is in every respect equal to its former expectation, and has always been celebrated for its excellence and superiority over most other brands; that it will shortly improve in value there is little doubt if the price of Wallaroo is maintained, and buyers would do well to secure it at once, for it is seldom that such an extremely favourable opportunity continues for any length of time, and it may, therefore, be subject to a very sudden and rapid advance." He did not refer to the Mining Journal as evidence of the fact, but it stated the general position of the case. Analyses and every other test had proved that the two coppers were perfectly equal in value if, indeed, they did not show that the Burra was slightly superior. On former occasions the equality was admitted, and the quotations were about the same—sometimes the Wallaroo and sometimes the Burra copper fetching the higher price, yet at the present time there is 5t. difference. same—sometimes the Wallaroo and sometimes the Burra copper fetching the higher price, yet at the present time there is 5l, difference. Wallaroo always stands as high as any other copper in comparison with best selected, but at present the Wallaroo copper was actually fetching more than manufactured. He would only offer an opinion as to the cause, which was that contracts had been entered into to deliver Wallaroo copper in particular, and that this had caused an extra quantity to be taken off the market, thus sending up the price. In the normal condition of affairs he felt sure that the question at the present moment would be why is the price of Wallaroo so high, especially as, if there were any difference, Burra was more pure than Wallaroo. The past half-year had certainly been unfortunate, but as to the future he really thought that when they had the pleasure of meeting the shareholders again, at the end of the year, they would be in a position to place a more satisfactory statement before them. be in a position to place a more satisfactory statement before them. There was no motion to bring before the meeting, but he might say that he would be happy to answer any question that might be put

Mr. Donaldson considered that they ought to have profits at all times. If their manager bought the raw material at the price he should do, adverse markets ought not to have any effect upon their profits profits. Any slight variation in a falling market ought to be re-couped in a rising one. He certainly thought that the purchases were not made in the interest of the company. A SHAREHOLDER remarked that on the smelting operations there

had been a loss, although they had purchased 150,000% worth of raw material.

The CHAIRMAN said that when the market fluctuated as it had done it was almost impossible to avoid loss sometimes, and he was of opinion that during the past half year there was no one that could come more near than they had done. Every variation in the unit was telegraphed over, and the purchases were made accordingly. If they lost their sources of ore in a bad season they would lose it; they must remember in a good one which would deprive them of profits altogether. He believed their purchases for the last six months would show a profit, and he hoped that at the end of the year they would show that they had done as well as in the previous year. As to the reserve fund, it stands at 11,000% here, and 4000% The CHAIRMAN said that when the market fluctuated as it had

on the other side. They must remember, too, that out of the present adverse balance of 6620l. they had actually received 3500l. as dividends. The dividend paid in February was included in the balance through their having estimated their stocks of copper at more than they subsequently realised.

A SHAREHOLDER would like to know how the 4000l. reserve in

Australia was represented, as he had never noticed it in the accounts?——Mr. Spencer Herapath said that it did not appear as reserve, but was reserved by writing off 1000/. a-year to the Adelaide wharf account, which was really making it an investment in freehold land. in freehold land.

A SHAREHOLDER enquired whether it was not possible to buy and sell on a different principle. He thought they ought either to buy at a price allowing more margin for contingencies, or ought to sell the copper to arrive as soon as they had it ready for shipment.

Mr. Friewer said the suggestions were, no doubt, good in theory, but unfortunately the remedy was quite unattainable. If he were connected with the copper trade he would know that if they offered a parcel of copper in the London market and told him that he could probably have it delivered some four or five months afterwards he would decline to purchase, and regard the terms as opposed to the general course of business. But they to some extent meet the shareholders' views as they receive advices each month from Australia as to their make of copper, and sold a corresponding quantity out of their stock here. The difficulty referred to was not new to the directors, and they had been doing their best to remove it. He believed the directors were fully alive to the needs of the concern and the wishes of the shareholders, and he could assure them that nothing the directors were fully alive to the needs of the what nothing wishes of the shareholders, and he could assure them that nothing

wishes of the shareholders, and he could assure them that nothing should be wanting on their part to make it what it ought to be. He reminded the meeting that the company had yielded them 6 per cent. per annum taking an average for 20 years, and that in that time they had passed through more than one period of difficulty, and would do so again.

Mr. WRIGHT said he was largely interested, he and his friends being the largest holders, and he thought that they should not take one half year's operations in order to make propositions to endeavour to injure the company. The largest and best concerns in this country, and especially those engaged in the metal trade, had not been able to make profits during the past six months, so that he could not see that it was surprising that they had not done so. It was disappointing, but he did not see that there were any grounds for complaint or alarm, especially as they were now again making profits.

The CHAIRMAN was sure that the directors would be impressed with the remarks that had been made, and being large holders themselves, would have much pleasure in announcing an improvement.

The usual complimentary vote of thanks having been given to the Chairman the meeting separated.

Begistration of Aew Companies.

The following joint-stock companies have been duly registered:-The following joint-stock companies have been duly registered:—
SOUTH AUSTRALIAN CONSOLIDATED MINING COMPANY (Limited)
—Capital 5000., in 11. shares. To acquire the leasehold lands known as the Yudanamutana and Wheal Blioman Mine, South Australia. together with the plant,
&c. The subscribers (who take one share each) are—James Cary, Bower Lodge,
Manchester, merchant; J. M. Davis, Renfrew House, Southsea, merchant; J.
Garne, 15, Lotus-road, Shepherd's Bush, gentleman; H. Martin, Sussex House,
Highbury New Park, merchant; S. R. Pattison, Queen Victoria-street; J. M.
T. Allingham, 55, Old Broad-street, solicitor; W. R. Bingley, S. Cambridge-ter
race, Regent's Park, barrister.
GRAY AND DAVISON (Limited).—Capital 50,000., in 101. shares. To soquire the business carried on by Frederick Davison under the firm of Gray and
Davison, of 370, Euston-road, and 18, Colqueth-street, Liverpool, organ builders.
The subscribers are—Charles Eley, 59, Finchley-road, St. John's Wood, 50; C.
Garbutt, Yonge Park, Holloway; C. N. Beazley, 95, Gulford-street, W.C., 50;
S. D. Waddy, Q.C., Temple, 50; E. S. Baikie, 21, York-terrace, Regent's Park,
10; James Ward, 114, Pall Mall, 10; A. Doland, Stockwell Park, 10; G. E.
HELM AND CO. (Limited).—Capital 40,000/. in 285 shares. To acquire and

Sandward, 11a, Pall Mall, 10; A. Doland, Stockwell Park, 10; James Ward, 11a, Pall Mall, 10; A. Doland, Stockwell Park, 10; G. E. Glies, Nuneaton, 1.

HELM AND CO. (Limited).—Capital 40,000!., in 26!. shares. To acquire and carry on the Grove Mills and the Vale Mills at Padiham, Lancashire. The subscribers (who take one share each) are—H. Helm, Grove House, Padiham; J. J. Helm, Padiham; E. Helm, padiham; W. Waddington, Piccadilly-road, Burnley; Thomas Southworth, Alexandra-road, Southporth, Alexandra-road, Southporth, E. Helm, pan, Markey, E. Helm, pan, Markey, E. Helm, pan, Markey, E. Helm, Padiham; E. Helm, pan, Markey, E. Helm, Padiham, E. Helm, pan, Markey, E. Helm, pan, Markey, E. Helm, pan, Markey, E. Helm, Padiham, E. Helm, pan, Markey, E. Helm, Padiham, E. Helm, Padiham, E. Helm, Padiham, S. Helm, Padiham, Padiham

Bournemouth: H. Cartwright, Bournemouth; E. Otto, Butter, Bournemouth.
RUGBY AND NEWBOLD CEMENT COMPANY (Limited).—Capital 10,000...
in 101. shares. To purchase blue lias land, and to carry on the manufacture of cement, bricks, and tiles. The subscribers are—H. W. Flint, 9, 81. George's-place, Canterbury, solicitor, 130: H. Sankey, Canterbury, solicitor, 1; Robert Sankey, Canterbury, solicitor, 130: H. Sankey, Canterbury, solicitor, 1; Robert Sankey, Canterbury, 1; James Hopewell, Rugby, necepietor, 130; Ridley Tait, Rugby, printer, 25; Roland Tait, Rugby, accountant, 25; C. W. Hopewell, Rugby, accountant's clerk, 1.

THE NORTH PARADE BRIDGE COMPANY OF BATH, constituted by deed of settlement, in 1835, is now incorporated as a limited company, with a capital of 12 000... in 50. shares.

of 12,00%, in 50%, shares.

THE BATHWICK BRIDGE COMPANY, constituted by deed of settlement, in 1826, is now incorporated as a limited company, with a capital of 10,000%, in 100% shares.—(The recent accident at one of the Bath bridges, and the presumed unlimited liability of the proprietors, has no doubt led to the incorporation of the two above-mentioned companies.)

New Zealand Gold.—Two specimens of auriferous quartz from the Moanatairi Mine, Grahamstown, Thames County, New Zealand, weighing together 1142 ozs., and valued at 1500l., have been depo-sited at the Bank of New Zealand, Queen Victoria-street, and are

VICTORIA.—The total yield of gold in Victoria for 1876 was 963,700 ozs., showing a decrease of 100,000 ozs. compared with 1875.

COMSTOCK MINES.—According to the returns made to the Assessor Storey County, Nevada, the six preductive mines on the Comstock lode produced te following quantities of ore during the quarter ending July 30:— Mines Belcher 5,837 \$235 \$134,755 California 49,967 92 4,527,455 Consolidated Virginia 39,778 95 3,775,862 Chollar-Potosi

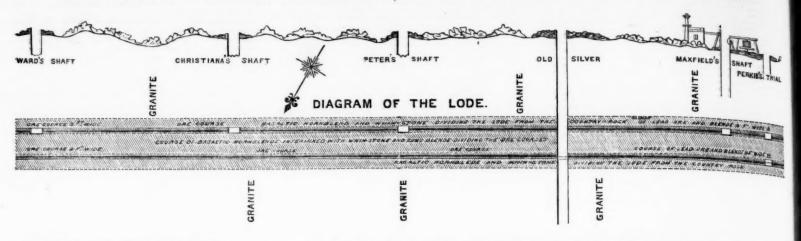
89,504,597 \$118 per ton. For the same quarter the Ophir Mine produced 18,250 tons, yielding \$669,200.—Mining and Scientific Press (San Francisco).

\$869,200.—Mining and Scientific Press (San Francisco).

LEAD MINING IN AMERICA.—The persistent decline in the lead market has had a disastrous effect on many mines on this coast. In Utah particularly the depression has been injurious. In several camps the mines have been compelled to discharge their workmen who had to go to work, prospecting, or anything they could fird to do. The low prices in lead have prevailed so long that the miners seem to think the market is frised, and the price at its normal condition. This coast produces such large quantities of this most useful and widely used metal, and so many mines have been opened within the past few years, that an immensely increased production naturally resulted. Where there is so much competition the price, of course, dropped, but it was hoped that it was only temporary: now, however, that this has lasted so long, the owners of mines producing lead have been greatly discouraged.—Mining and Scientific Press (San Francisco).

HOLLOWAY'S OINTMENT AND PILLS.—The finest remedies in the world for bad legs, old wounds, sores, and ulcers. If used according to directions given with them there is no wound, bad leg, or ulcerous sore, however obstinate or long standing, but will yield to their healing and curative properties. Numbers of persons who have been patients in several of the large hospitals, and under the care of eminent surgeons, without deriving the slightest beneft have been throughly cured by Holloway's Ointment and Pills. For grandular awellings, tumours, scurvy, and diseases of the skin there is no medicine that can be used with so good an effect. In fact, in the worst forms of disease, dependent upon the condition of the blood, these medicines, if used conjointly, are irresistable.

MINES. HULTAFALL AND BLENDE LEAD



HULTAFALL LEAD AND BLENDE MINES.

-In reporting on the above mines I will not tire your patience with preliminary remarks, but go straight to the subject, knowing that the question involved in mining as well as in commerce proper is not one of fine writing but \pounds s. d. The above section and diagram have been made from measurements and notes taken on the gram have been made from measurements and notes taken on the spot, and they may be looked upon as fairly showing the position of the shafts, extent of the workings, and the width and general character of the great lode. You will see by the section that several trial pits or shafts have been sunk, but, excepting at Oid Silver Mine (and there is no record of it here), nothing has yet been done to lay oper the ore ground by levels. The diagram shows the Hultafall lode (measuring within the granite or country rock proper) to be 16 fms, wide, and composed of the following ingredients:—1. Resting on the granite which forms the footwall of the lode is a course of basaltic horn-blends, intermixed with whinstone, lode is a course of basaltic horn-blende, intermixed with whinstone, 3 fms. wide; then No.1 ore course, composed of lead ore and zinc-blende 9 ft. wide, following which there is horn-blende, whinstone and zinc-blende intermixed 7 fms. in width; then comes No. 2

blende 9 it, wide, following which there is horn-blende, whinstone, and zinc-blende intermixed 7 fms, in width; then comes No. 2 ore course, composed of rich silver-lead ore and zinc-blende, about 9 ft. wide, the remaining portion of the lode (i.e., from No. 2 ore course to the granite which forms the hanging-wall of the vein proper), being filled with ingredients of similar character and width to those contained in the footwall part of the lode. The foregoing particulars show the 1 wile to be, as previously stated, 16 fms. wide.

Taking the shalts servatim from left to right, and reading from notes, I find that at Ward's palpable proof exists that a strong lode well charged with the ores of lead and zinc traverses the hard granite rocks up to that point for a certainty; and judging from the contour of the country, and the very marked line along the surface eastward which agree with the mean direction of the lode, I am of opinion that the Champion lode in question passes uninterruptedly for miles through the country beyond Ward's shaft. Christiana's Shaft: A strong wide productive lode can also be seen here, and I can advise you to expect very profitable results if the mine be vigorously laid open and worked.

Peter's Shaft: It would only be a waste of time to go into details about the lode here; suffice it to say that it is analogous in every respect to what can be seen at Christiana's.

Old Silver Mine: The shaft of this mine it is said is about 160 ft., or 25 fms. deep, and judging from the tips, or waste heaps, I should imaging that the workings have hear carried down to that extent

or 25 fms, deep, and judging from the tips, or waste heaps, I should imagine that the workings have been carried down to that extent. Rich specimens of blende are scattered through the debris at surface here, but it is very probable that the principal yield of the mine was silver-lead ore, hence the expressive name of "Old Silver

Mine."

Maxfield's Shaft: This shaft is now 12 fms. deep, and is 20 ft long by 9 ft. wide, and is being sunk by a full staff of men on No. 1 ore course, which, as previously described, is composed of nearly solid blende and lead ore, the latter containing about 23 ozs. of silver to the ton of ore. The said ore course being 9 ft. wide (full width of the shaft) I estimate the yield of blende and lead ore as follows:—Blende on foot and hanging-wall of shaft together 7 ft. wide, then 5 ft. long × 6 ft. deep × 6 in. wide=1 ton, by which rule 7 ft. × 6 ft. × 6 ft. would give 14 tons for every 6 ft. in length and depth of the shaft. The lead producing part of the lode is shown in the diagram by the blue* line drawn through the blende course, and may be taken at 20 is,, 4 in. being allowed for stone or matrix. Taking 5 in. of the lead course to yield 1 ton of that ore the full width named would give 4 tons per 6 ft. long and 6 ft. deep of the shaft. This being so, and Maxfield's shaft being 20 (t. long by 9 ft. wide, you will readily see that the full yield for 6 ft in depth is—blende, round numbers, 46 tons; lead ore, containing 23 ozs. of silver per ton, 13 tons. The blende should be dressed up to (say) 54 per cent., and the lead ore 70 to 73 per cent.

70 to 73 per cent.

I would remark here that I crushed 60 lbs, weight of the orestuff broken by myself in the bottom of the shaft, which stuff is a fair sample of the lode as I saw it. Washing this stuff by the mode which obtains in tin mines in Cornwall I got the following results: —Every pound of crude stuff yielded 4 ozs. of what I shall call crop lead ore, and 8 ozs. of crop blende, the fine ore in each case being washed away in the process of cleaning. Thus much for the size of the lode and yield of the ore course at Maxfield's shaft.

At A and B in the diagram two trial pits (locally called Perkins' trials) have been sunk each 5 to 6 feet deep, and in which a lode similar in character to that in Maxfield's shaft can be seen in the bettom and sude in fact conving up even to the very surface.

bottom and ends—in fact cropping up even to the very surface My opinion is that if Perkins' shaft were sunk 20 fms., or a 20 fm. level driven west to the ground in question from Maxfield's shaft. a lode and course of ore equal in size and value to the great lode in the Vicille Montagne Mines adjoining would be found. The machinery for pumping, winding, and dressing should be left to the judgment of your mining engineer, and out of courtesy to him I shall not con-ider the question. What you want to make this property one of the greatest mining fields of the day is to get Maxfield's shalt down to a 50 fm. level, with levels going at proper intermediate distances from that point to surface and with communications. termediate distances from that point to surface, and with communications made west to a shaft (say) 50 fathoms from Perkins' trials and east to Christiana's, you could easily get 200 tons of the mixed ores per diem. In due course a mine equal to the celebrated Vieille Montagne may be expected at Hultafall. It is said that the yield of ore from the said great mines last year was 5900 tons of lead and 54,000 tons of blende ARTHUR WATERS.

Radbrook. Shrewsbury, Aug. 21. PS .- The Vieille Montagne Mines are about 400 fms, to the south of the Hultafall lode.

HULTAFALL LEAD AND BLENDE MINES, SWEDEN.

SPECIAL REPORT. The subjoined special report upon the Hultafall Lead and Blende Mines, in the Nerick district, Orebro, Sweden, has been made for Mr. George Battras, of Austinfriars, by Captain RICHARD SOUTHRY, of West Chiverton:—

DEPORT OF THE HULTAFALL LEAD AND BLENDE MINES, SITUATED IN THE DISTRICT OF NERICK, PROVINCE OF OREBRO, SWEDEN.

In framing my report of these mines, I will call your attention to be great extent of ground there is on the course of the lodes. The

* [Being unable to show colour in our diagram, it must be understood that the pale shading represents the ore course; the closer diagonal shading the bleade course; and the full black line the blue line here mentioned.] Scale: About 25 fms. to the inch.

one on which Maxfield's shaft is sunk there is in round numbers one

one on which Maxfield's shaft is sunk there is in round numbers one mile in length, the bearing of the lode being north-east by southwest. Several hundreds of fathoms in a north-east direction from Maxfield's shaft there is a cross lode of great promise with about the same distance on its course as the one just alluded to, with several tons of rich blende already raised from the outcrop. The settis-held on leases for 21 years, renewable in perpetuity at the company's option, at a royalty of 2s. 2½d. for every ton taken away from the estate; these terms I consider exceedingly favourable to the investor. Maxfield's Shaft.—This shaft is sunk on the course of the lode about 60 ft. from surface, underlying about 2½ ft. in a fathom. At the bottom of the shaft the lode varies in size, and is from 6 to 8 ft. wide, with a regular and well-defined footwall, but no true hanging wall has yet been seen. About 15 fms. west of this shaft, at what is called the Perkins Mine, the line is opened on at surface, the lead and blende bearing part being about 10 ft. wide. To the north of Perkins Mine I found another shode pit about 10 ft. deep, named the Alexandra shaft, with a limb of the lode in it producing good work for lead and bl-nde. Between this and the former there is a borse of granite, and judging from the disordered state of the hanging horse of granite, and judging from the disordered state of the hanging wall alluded to in Maxfield's shaft as depth is attained and a cross cut put out, I have no doubt but what they will form a junction and become one lode. In Maxfield's shaft I had bored and shot ten and become one lode. In Maxfield's shaft I had bored and shot ten holes, and then sampled the quantity broken, took it to London and had it as-ayed, with the following re-uuts:—Lead, 16:25 per cent; zinc, 30:60 per cent; silver. 4 ozs. 15 dwts. per ton of 20 cwts. I then cut in two parts a large heap of smalls lying on the surface, which I consider the poorer portion of the mineral raised from the shaft throughout the sinking, and this sample produced as follows:—Lead, 8:50 per cent; zinc, 14:40 per cent; silver. 4 ozs. per ton of 20 cwts. These two samples will give the average value per ton of lode stuff broken in sinking the shaft from surface to the present depth. This I find to be about 81. 10s. per ton, and assuming that the lode will produce 20 tons per fathom, which is under rather than above the mark, then the value of the lode is at least 1701. per fathom. Now, from these figures I will deduct for breaking, dr-ssing, smelting, furnace loss, and transit, 201, per fathom, so that I feel every

above the mark, then the value of the lode is at least 1700, per lathom. Now, from these figures I will deduct for breaking, dressing, smelting, furnace loss, and transit, 201, per fathom, so that I feel every on fidence in calculating the lode in the bottom of the shaft to be worth fully 1501, per fathom.

I now come to Perkins and Alexandra trial pits at the surface, where I had six holes bla-ted, and having carefully taken samples from the stuff broken by these holes, I had them assayed with the following results:—Lead, 27-10 per cent; zinc, 5-40 per cent; silver. 10 azs. 9 dwts, per ton of 20 cwts. This is exceedingly good, and worth at the very least 91, per ton as broken, without being subjected to any process for dressing. After I had thoroughly examined the lodes and sampled the different points of interest, I was allowed through the kindness of the managing director to inspect the surface operations of the Vieille Montagne Company, which sett adjoins the Hultafall estate. It is said this company send away from their works 40,000 tons of dressed blende annually, independent of lead, and, judging from the magnitude of the mines and their immense accumulation of dressed mineral at the surface, I should not say this smount is in any way exaggerated. I to k due notice of the mineral under treatment, and found it to be of precisely the same character as that which is being raised in the Hultafall Mine, but, at the same time, what I saw going into the crusher was not so rich as the singeral Libeke in the bestern of Morefields head. I now at the same time, what I saw going into the crusher was not so rich as the mineral I broke in the bottom of Maxfield's shaft. I now returned to examine the roads and facilities for treating the Hultareturned to examine the roads and facilities for treating the mainerful ores, and, according to the experiments which I have made on a small scale since my return, I consider all that is required to dress the mineral is ordinary care and machinery adapted for the occasion—such as stone breakers, crushers, classifiers, juggers, tables. &c. About three miles from the mine a mill with ample water for dressing purposes is at your command, and the situation for laying out the machinery and dressing-floors quite adapted for the purpose; a condessed for early and slaights can be sailly made to take the mineral the machinery and dressing-noors quite adapted for the purpose; a good road for carts and sleights can be easily made to take the mineral to the mill at the very outside co-t of 2s. per ton, so that any time as the mine progresses, if thought advisable, this could be easily converted into a railway; but for the present, until the mine is opened out, and suitable machinery erected for the reduction of the ores, I should advise carting it to the mill. I would now make a few remarks with reference to the development of the lodes and the few remarks with reference to the development of the lodes and the

eressary machinery suitable to treat (say) 40 tons of undressed nineral per diem.

Maxfield's shaft should at once be timbered, cased, and divided marrieds shart should at once be timeered, cased, and divided down within 8 ft. of the present bottom, and a good substantial factway put down, after which continue the rinking 5 fms. further, making a total distance from surface of (ray) 15 fathoms, and then commence to drive. While this is being proceeded with clear away the earth from the back of the lode at surface, and down with a second shaft ahout 50 fms. distant, in the most productive part of the outcrop east or west of Maxfield's shaft as the case may be. No time should be lost in effecting a communication from one shaft to the other, as this would not only cause good ventilation, but would open up a profitable section of ore ground available for stoping in very short time, when sinking should be resumed with all possible ispatch. A pumping and drawing engine would be required, but would not recommend one to act for both purposes; the mine shallow a horse-whim w for the pre-ent. An engine of sufficient power to drive a crusher capable of crushing, as I before stated, 40 tons of mineral at least per diem, with the necessary appliances for dressing, should be erected forthwith at the mill already named. The road leading thereto should be put in thorough repair without delay, and in adopting this course a small staff for the present would be quite sufficient to superintend all operations until such time as returns will commence and the underground workings get into a more advanced stage.

vanced stage. value a range.

I will now calculate the proceeds from one crusher only, and will put it down to its very lowest. (say) crush 40 tons per day, which in round numbers, after allowing for all contingencies, will be shout 1000 tons per mouth, and taking this as worth (say) only 5l. per ton, is equal to 5000l. Deduct cost—pumping, raising, dressing, dues, freights, &c., 1200l. leaves a net prefit of 3800l, on the month's working the state of the s working. As a matter of course the returns will gradually increase as the mine is being laid open, the output becomes greater, and the floors extended, always supposing the lode continues its present size and value. Judging from present appearances this property bilds fair to become equally as remunerative as its neighbour—the Vieille Montagne Company. I beg to say, in conclusion, that I never saw

such rich deposits of mineral for such a shallow depth; and we before said I do not hesitate to repeat, if the lode holds go depth and extends in length nothing can prevent its ultimate coming one of the greatest successes that ever came under notice.

RICHARD SOURS

HULTAFALL LEAD AND BLENDE MINES.

Report to Mr. GEORGE BATTERS upon the Hultafall Lead and B Mines, in the parish of Hammar, and county of Orebro, Su by T. Currie Gregory, C.E., F.G.S.:—

by T. CURRIE GREGORY, C.E., F.G.S.:

On July 24 and 25 I inspected the Hultafall Mines, and nown thereon. They comprise the Marsettar Estate, about 2000 as ext-nt, in the parish of Hammar, and county of Orebro, 8w The lease is for 21 years, renewable in perpetuity at the optithe company, and at a royalty of 2 kroners, or 2s. 2sd English to or of ore. There is a railway station within 3s miles of the proposed dressing-floors at Salabole. ton of ore. There is a rail way station within 3½ miles of the From the mines to the proposed dressing-floors at Salaholm, tance of about three miles, there is a road along which the obe carted for 2s. per ton. I traversed it, and also the banks of stream flowing from Salaholm, for 600 yards, to a pot whence tarrying 10 tons can take the ores to the lake, about one mit tant, to be shipped in sailing vessels for Goteborg, though lake tern and the Ship Canal. I also sailed down the lake for adis of 12 miles, thus satisfying myself with the thorough access of the property for shipment of ores and supplies. This projection is the famous blende and lead mines of the Montague Company. Their ores are taken by locomotives o wide guage railway, 9½ miles long, to Ammerberg, where the dressed in the most approved manner by self-acting dressin chinery. The geological formation is granite and horneblends extensive property has not been generally examined for lode chinery. The geological formation is granite and norneblends, extensive property has not been generally examined for loss the explorations have been confined to a lode near Yiells Mon and to it my attention was directed. It is called Maxfield's a course north 62° east. On it, 309 ft. from the northern boundary of the confidence of the course of the c a course north 62° east. On it, 309 ft, from the northern boun a shaft (Maxtheld's) has been eunk 61 ft, deep, 21 ft, long, and wide. I was enabled to examine it to the bottom, as it was clear of water. From about 5 ft, from the surface to the botte increases from 6 ft, to about 9 ft, in width, dipping average 1 ft in 7 for the whole depth. The footwall is warm pretty distinct, and at the bottom I think I recognised the han wall, but it is desirable to expected at once to see whether pretty distinct, and at the bottom I think I recognised mean wall, but it is desirable to cross-cut at once to see whether covery at the surface, 45 ft. to the we-t, does not constitute of the lode. I had nine holes put in the bottom of the shaft the out the lode, and after the bottom was thoroughly cleaned up them fired, and the whole of the material drawn to surface at them nr.d, and the whole of the material drawn to surface and tri, this I had turned over and broken up, and inspected min To the eye the zinc blende predominated over lead about 2 to the eye the zinc blende predominated over lead about 2 to good solid stones of lead or were plentiful. These comes bar of galena running through the bottom of the shaft. The wiith of the lode appeared to be a mass of ore, without any abut such as must necessarily be detected in assay or by medium nipulation. I took an average sample of the lot as neady could, and submitted it to Mesers. Johnson, Matthey, and assay, who have declared it to contain 27.5 per cent. zinc, 13 assay, who have declared it to contain 27.5 per cent. zinc, 13 cent. lead, 5.50 ozs. of silver per ton of 20 cwts, of ore-or (sy)2 of silver to the ton of dressed leaders, allowing it to be dressed up to 70 per cent.—and to be of 3.76 specific gravity.

In order to test the productiveness of the lode from the sm measured all the heaps of ore (after cutting through one), weighed a cubic foot as nearly as I could, and found that it yielded 15 tons to the cubic fathom. This was satisfactor, much as the suscific cravity (3.76) gives 22 tons to the still

much as the specific gravity (3.76) gives 22 tons to the solid fathom, and seeing that the lode increases in width and in d and that lead is most abundant in the bottom, we may reaso expect continued improvement as depth is attained. That the and that lead is most abundant in the bottom, we may reason expect continued improvement as dej. this attained. That he is persistent and productive in length is abundantly proved by shafts and pits which have been put down on it in the Les property immerliately adjoining to the north-east. In the Hultafall the lode is proved for a length of 473 ft. byt in addition to the Maxfield shaft. In the Perkin's trial, 92 the couth-east of Maxfield shaft and a few feet deep, the lodes are the lost and a few feet deep, the lodes

the south-east of Maxfield shaft and a few feet deep, the lode a well for lead, and 45 ft, to the weat of this is the Alexandra referred to above, where there seems to be a limb of the lode, carrying blende, How far to the south-east the lode may be ductive I had no means of ascertaining, but I did not observe likely disturbing causes.

I had written thus far when I was informed, to my great faction, that the proprietors had agreed to add the Lerbach to

I had written thus far when I was informed, to my great faction, that the proprietors had agreed to add the Lerbach thultafall, thereby adding very greatly to the ascertained value the company's property, and largely increasing the possible as of output. I passed over to the Barbara shaft in the Vieille Magne, where ore was being raised in quantity, and noted the similar appearance it bore to that from Maxfield's shaft; in facilitation of the surface of the wide, and is now at the depth of 50 20 lt. wide. This shaft is on a lode running somewhat paralle the Maxfield lode. This, coupled with the fact that it is so pour tive to the south-east, promises well for the Maxfield lode in tive to the south-east, promises well for the Maxfield lods is

Having ascertained the identity of the ores I visited the dr Having ascertained the identity of the ores I visited the dresses floors at Ammerbeg, and saw the whole process of dressic by acting machinery. An inspection of these floors would convine most scriptical that this ore can be dressed. I had no doubt on my mind when I saw a sample of the ore in London, for I dressed successfully a more difficult ore in Wales years ago by what similar machinery as that in u-e at the Vicille Mont Such machinery can be very quickly manufactured in Wales sent out and erected in complete form for the treatment of Hultafall ores. Hultafall ores.

I have already mentioned that a site for the dressing-flow I have already mentioned that a site for the dressing-flood been selected at Salaholm, a distance of little over 3 miles, and by an existing road ores can be carted thither for 2s, pet an experience of this road has been partially surveyed, I am told, a which a light tramway could be easily made from the mise is floors, thereby reducing the cost of carriage. At Salaholm, as the which flows from Daby Sjön, or lake, and is fed by the drainage Wieille Montagne Mines, and 4 square miles of a water-shed, isdus up and serves to drive a saw-mill and a flour-mill by a water-shed. up and serves to drive a saw-mill and afour-mill by a water 25 ft. in diameter and 4 ft. breast. This water supply should abundant at all times for dressing purposes. The dam coaling pth; and with holds good to ultimately came under

IINES.

Lead and B Orebro, Sw

s, and now r out 2000 acr Orehro, Sw y at the opti 2½d. English tales of the n

which the out the banks of both whence he out one mit though Lake as ke for a dispuph accessing. This promotives or g, where the comotives or g, where the comotive or g, where the comotive or g, where the comotive of the visual for loder Viville Monti faxfield's, an orthern bound ft. long, and m, as it was eace to the both which the companion of the companion o

th, dipping call is waving nised the han see whether constitute a the chaft through

the shaft thricken dupling the cleaned upling to surface and spected miner about 2 to 1 ots of lead, whese come from the come from the community and community and community, and communit

ent, zinc, 13
e—or (sw)
to be dressed
ity.
rom the sur
rrough one),
found that it
satisfactory,
to the solid
oth and in
e may rease
ad. That the
itly proved by

tly proved by

of 473 ft. by ton's trial, 92 lt.
cp, the lode so
the Alexandra
of the lode, cl.
lode may be
in not observe

o my great he Lerbach to certained value possible and the Vicille M

the Vielle M
d noted the
shaft; in fa
here that the
depth of 50
ewhat parall
at it is so pre
xfield lode in

ited the dree

ould convine no doubt of ondon, for I vars ago by Vieille Monta ed in Wales

treatment o

ressing-floor
3 miles, and
2 2s. per tos,
I am told,
the mines to
the drainage or
refred, isdam
by a water-saupply shoul

supply should be

at 10 ft, and ultimately the work might be all done by water-but for the present it is proposed to drive a crusher and ma-month of treating 60 tone of ore stuff par day k-

ery capable of the dam there is a most suitable site for floors, min 50 yards of the dam there is a most suitable site for floors, min 50 yards of the dressed is gress by lake (as I have already explained) for the dressed is gress by lake (as I have already explained) for 21 years, renew-the water privilege I am told is secured for 21 years, renewing prediction of 1000, per annum, with use of the mills. The is perpendicted in the second of the mills of of the

polis per ton.

| Is being learned on by the vience montagne Company I am told being deraission summer and winter, so proper provision has the thinde to do likewise at Hultafall. I have dwelt very fully to be made to do likewise at Hultafall. I have dwelt very fully to design department, as it is necessary that these ores should the design department, as it is necessary that these ores should be designed as the machine of the success to make them commercially valuable, and the success the field working in treating similar ores should set this matter as the field of the success the success that the success the success the success that the success the success the success that the success t

is tille Montagne in treating similar ores should set this matter it lielle Montagne in treating similar ores should set this matter is return to the mines. Taking the assay made by Messrs is return to the mines. Taking the assay made by Messrs is returned to the local set of the sheft as a basis, and allowing for all deductions usually important the sheft as a basis, and allowing for all deductions usually important the sheft as a basis, and allowing from the local to be 73½ per is the zero. I determine the value of the local to be 73½ per is the zero. I determine the value of the local to be 73½ per is the zero. I determine the value of the local to be 73½ per is the zero. I determine the value of the local to the clean ore to mark the sheft of all purposes, including freight of the clean ore to mark the propose of the local promises as the sheen and promises now, and the works are efficient as it has been and promises now, and the works are efficient out, I see no difficulty of its attainment. The dressing desirable he made as complete as possible, and pushed forward at the shell he made as complete as possible, and pushed forward at the shell he made as the shell of maximal the property of the purpose of opening ground and ventilation. There is mining difficulties, the water is light, the containing rocks amonthed the property of the purpose of opening ground and ventilation. There is be abundant and cheap, and so is timber; therefore, the right we will opened up whilst the dressing floors are being the set. The containing the purpose of the local property of the purpose of the local property of the set of the local property of the local pr Queen Victoria-street, London, Aug. 7.

FOREIGN MINING AND METALLURGY.

FOREIGN MINITED AT THE TOTAL TO THE TOTAL THE

with the Belgian State Railways proposes to let imistration of the Belgian State Railways proposes to let ipox a contract for the delivery of about 6600 tons of propose per on the Hijf system; this represents the mainted for laying about 31 miles of single line. These mainted for laying about 31 miles of single line. These mainted for to the extent of one-half in old iron and the maintenance of the propose at the ting this contract of increasing the amount tendered for eat of 50 per cent. Metallic sleepers are now expected to progress in Belgium; the employment of them had been a decided on, and everything seems to indicate that the ngatopogress in Belgium; the employment of them had been size decided on, and everything seems to indicate that the aginers have now recentised the indispensable necessity of Amaricle of the specification prepared in connection with simetnow about to be let provides that the royalty payable in at diparent rights shall be at the charge of the State. The same Figes Company is the sole proprietor of the Belgian tof Mild; the other Belgian works will then have to come and M. Hill; the other Belgian works will then have to come a merstanding with it, in order to obtain the necessary audito make the steepers proposed to be delivered. The Acoz is Company has just brought its rolling mill for plates into minst Acoz. It is proposed to again bring into operation a part of the Chatelineau works—probably in two months. A matter 5000 tens of steel rads for the Upper Italy Radway has benitted Milan. The Union Company, of Dortmund, obtained autment 47.6. per ton; several Belgian works tendered, but withingher rates. Measures are being matured for the formalization mercial syndicate at Charleroi. The Belgian iron works geruly employed, but prices do not revive.

steen comparatively little business doing in the Belgian there has, indeed, been scarcely any interesting fact to contracts of serious importance are expected to be condmillest month. It would, perhaps, be wiser now to lay many supplies, or at any rate to conclude necessary contracts, may consume still appear to believe in a fall, and requireconcessions in current prices-concessions which many mass do not wish to make, since they are hoping for a return parates rather than otherwise. A very similar state of things lead to have prevailed at this period of 1876, while not been much doing in the French coal trade, neverseled as a whole has not changed. Purchasers show a disposition while the same contracts have been concluded this week, although the mass a whole has not changed. Purchasers show a disposition while the same contracts have been concluded this week, although the mass a whole has not changed. Purchasers show a disposition while calliars of the considerable sacrifices are made

bifutur, while colliery owners appear to consider that they misdattheextremelia its of possible concessions. Foreigners who beheading most from the hesitating tone of business; Abb especially Belgian applementating tone despecially Belgian coalowners are making great, and not unsuccessful, efforts to secure orders. It remains to be ser they will be enabled to maintain the ground which gained when the situation clears up a little. A strike at has terminated; it was of a local character, and did not the stroughling pits, as had been at one time feared; maintaines are certainly not favourable to extensive Munistances are certainly not favourable to extensive to regards the basin of the Loire, the only point which all for notice has been a slight increase in the deliveries; at varied, and do not appear likely to vary until the seminar.

Sember.

Month been much doing in copper at Paris. Chilian in labe 731, 198.; ditto ordinary descriptions, 711, 108.; ditto 751: English best selected, 771.; and pure Corocoro 751, 198 per ton. The German copper markets have present and the process have experienced no change.

In the much business passing in tin at Paris. Banca 751, 44; Billiton, 711.; Straits, 711. 128.; Australian, and English, 711. 48, per ton. The German tin markets are yinactive. The Paris lead market has not exhibited its; French, Belgisn, and German have made 201. 48, per nd English, 71l, 4s. per ton. The Bostons and English, 71l, 4s. per ton. The Paris lead market has not exhibited very inactive. The Paris lead market has not exhibited per lead of the per le

Distrock Lode.—Some interesting particulars concerning ings on the Comstock have been collected by Mr. James 5, of Virginia Gity, who states, as the result of his researches, but of the Utah is 1350 ft. deep, and 2070 ft. of drifts have on two levels. The Sierra Nevada shaft is 1700 ft. perpensith no incline from it, and there are 11.000 ft. of drifts, in Consolidated and Mexican have no shafts, but work the Ophir; Ophir shaft or lowest workings are at a depth set; Consolidated Virginia and California about the same. Belcher have no shaft, but work through the Gould and Improse a joint shaft, which is 1900 ft. deep. The Savage petin the lode) is 2300 ft. vertical and incline. The deepest what which is not considered on the Comstock, but immediate of or east of the Chollar-Potosi, is that of the Julia, the others have inclines from their perpendiculars, comstate deepest vertical shaft is that of the Sierra Nevada, the others have inclines from their perpendiculars, comstate depth of from 1200 to 1300 ft. None of the mines have the none shaft through which they are working. The Belcher the one shaft through which they are working. The Belcher

has an air and pump shaft, besides their hoising shaft. The Combination, which is being sunk by the Chollar-Potosi, Hale and Norcross, and Savage, is now 1500 ft. in depth; that shaft will, I suppose, in time be the deepest vertical one in this district. There are three compartments in most of the shafts; some have four; one is used as a pump shaft, the other two far hoisting through. There are 81,870 ft. of drifts in the aggregate in the mines from the Utah to the Belcher inclusive, about 15½ miles, not including numerous crosscuts; there are also a great many winzes. There will soon be connections from the Utah on the north to the Belcher on the south, a distance of 16,400 ft. It is my impression that there are no mines in Europe being worked at much greater depth than some of those here. The more depth attained the greater the expense attached to mining on account of water and heat to contend with.

Hydraulic Engines.—Mr. John Hastie (John Hastie and Co., Kilblain Engine Works, Greenock) has recently patented an invention which at an official trial appeared admirably adapted to meet the necessary requirements, and provide a water-engine which is sooner or later likely to take the place of steam in various works. The object of Hastie's patent hydraulic engines is to obviate the waste of water, and to have a means of instantaneously adapting the engine to the variations of power it has to exert, so that the consumption of water will in every case be in proportion to the power to be exerted. This is accomplished by means of a variable stroke of piston in the engine employed, and the mechanism for accomplishing this being automatic, or self acting, works and adapts itself to its load, however varied, independent of any attendant, and without stopping the engine of machinery. The first, the experimental engine, on this principle was the one exhibited. It is arranged with two diagonal cylinders, having their pistons working on the same crank pin. The cylinders are 2½ in diameter, the maximum stroke 4 in., and the minimum stroke 2 in, thus giving a range of variamorn stroke equal to a saving of 50 per cent. of water, but from experiments Messrs. Hastie have found that these proportions can be improved, and that they can arrange an engine on the automatic principle fitted for economising up to 66 per cent. of the economic value of the self-acting varying stroke of the engine, the variations in the work done was represented by weights applied to the end of a long lever from a friction brake. In the unavoidable absence of Mr. Wilson, C.E., who had agreed to conduct the experiments, three trials were made respectively by Messrs. Pattison, Methven, and Brunton. The result of these experiments showed a saving of water varying from 5 to 50 per cent., according to the amount of weight applied at end of lever. HYDRAULIC ENGINES.-Mr. John Hastie (John Hastie and Co.

BICKFORD'S PATENT
FOR CONVEYING
O HARGE IN

Obtained the PRIZE MEDALS at the "HOYAL EXHIBITION" of 1861; at the "HOYAL EXHIBITION" of 1861; at the "INTERNATIONAL EXHIBITION" of 1874, in London; at the "IMPERIAL EXPOSITION," held in Paris, in 1855; at the "INTERNA TIONAL EXHIBITION," in Dublin, 1865; at the "UNIVERSAL EXPOSITION," in Paris, 1867; at the "GREAT INDUSTRIAL EXHIBITION," at the tona, in 1869; TWO MEDALS at the "UNIVERSAL EXHIBITION," vienna, in 1873; and at the "EXPOSICION NACIONAL ARGENTINA," Cordova, South America, 1872.



PICK FORD, SMITH AND CO.
of TUCKINGMILL, CONNWALL; ADELPHI
BANK CHAMBERS, SOUTH JOHN-STREET, LIVEKPOOL; and 85, GRACECHURCH-STREET, LONDON,
E.C., MANUFACTURERS AND ORIGINAL

E.C., MANUFACTURERS AND OR IGINAL
PATENTEES of SAFETY-FUSE, having been in
formed that the name of their firm has been attached to
fuse not of their manufacture, beg to call the attention of
the trade and public to the following announcement:
EVERY COLL of FUSE MANUFACTURED by them has TWO SEPARATE
EHREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO, CLAIM SUCH TWO SEPARATE THREADS as
THEIR TRADE MARK.

BENNETTS' SAFETY FUSE WORKS, ROSKEAR, CAMBORNE, CORNWALL.

BLASTING FUSE FOR MINING AND ENGINEERING PURPOSES. Suitable for wet or dry ground, and effective in fronical or Pol- r Climeter

W. BENNETTS, having had many years experience as chief engineer with cases. Bickford, Smith, and Co., is now enabled to offer Fuse of every ariety of as own manufacture, of best quality, and at moderate prices. Price Lists and Sample Cards may be had on application at the above address CONDON OFFICE -H. HUGHES, Esq., 95, GRACECHURON STREET,

THE TAVISTOCK IRONWORKS, ENGINEWORKS FOUNDRY, AND HAMMER MILLS,

NICHOLLS MATH MATHEWS, ENGINEERS, BRASS AND IRON FOUNDERS, BOILER MAKERS AND SMITHS.
MAKERS OF

MARERS OF

CORNISH PUMPING, WINDING, AND STAMPING ENGINES; STEAM

CAPSTANS AND CRUSHERS; WATER-WHEELS; PUMP-WORK; SHOVELS, AND HAMMERED IRON FORGINGS OF EVERY DESCRIPTION.

Also of SPUR, MORTICE, MITRE, BEVIL, and other WHEELS, of any dia meter up to 12 feet, made by Scott's Patent Moulding Machine, without the aid of patterns, and with an accuracy unattainable by any other means.

MACHINERY or FOREIGN MINES carefully prepared.

SECONDHAND MINING MACHINERY, in good condition, always on sale.

M. R. W. F. STANLEY, MATHEMATICAL INSTRUMENT SCIENCE AND ART DEPARTMENT, ADMIRALTY, &c. MATHEMATICAL, DRAWING, and SUREVING INSTRUMENTS of every description, of the highest quality and finish, at the most moderate prices. Engine Divider to the Trade.

Address—Great Turnstile, Holborn, London, W.O.

MAPS OF THE MINES, AND OF UTAH TERRITORY.

ROISETH'S NEW AND REVISED MAP FOR 1875,—
Bize 40 by 56 inches, scale 8 miles to the inch. Han-Isomely engraved, cooured in counties, showing the Towns, Settlements, Rivers, Lakes, Railroads,
Mining Districts, &c., throughout the Territory, and all the Government Surveys
to date. Mounted on cloth. 22; half-mounted, £1 12s.; pocket form, £1.
Also, GENERAL MINING MAP OF UTAH, showing twenty-eight of the
principal Mining Districts adjacent to Salt Lake City, and location of the most proninent mines. Price, pocket form, 6s.

principal Mining Districts and proceedings of the Management of th gether with the Aliceson.

et form, 8s.

For sale, and supplied by—

TRUBYER and Co., 57 and 59, Ludgate Hill, London; er

B. A. M. FROISETH. Sali Lake City, Utah, U.S.

Second Edition. Just published, price 8s. 6d.

A NEW GUIDE TO THE IRON TRADE
OR, MILL MANAGERS' AND STOCK-TAKERS' ASSISTANT:
Comprising a Series of New and Comprehensive Tables, practically arranged to how at one view the Weight of Iron required to produce Boiler-plates, Sheet-iron, and Flat, Square, and Round Bars, as well as Hoop or Strip Iron of any dimensions. To which is added a variety of Tables for the convenience of Merchants, including a Russian Table.

BY JAMES ROSE.

Batman's Hill Ironworks, Bradley, near Bilston.

OPINIONS OF THE PRESS.
y laid down, and the information desired can be instant

OPINIONS OF THE PRESS.

"The Tables are plainly laid down, and the information desired can be instantsneously obtained."—Mining Journal.

"O copies have been oriered in Wigan alone, and this is but a tithe of those to
when the book should commend itself."—Wigan Examiner.

"The work is replete on the subject of underground management."—M. Baner,
Colliery Proprietor.

"De had on application at the Mining Journal Office, 26, Fleet-street, London.

THE NEWCASTLE DAILY CHRONICLE THE NEW CASTLE DAIL CHRONICLE (SETABLISHED 1764.)
THE DAILY CHRONICLE AND NORTHERN COUNTLES ADVERTISER Offices, Westgase-road, Newcastle-upon-Type; 50, Howard street, North Skinder; 198 High-street, Sunderland.

TONITE, OR COTTON POWDER,

THE BEST, SAFEST, AND STRONGEST

BLASTING POWDER

Particulars from-

DINEEN, SON, AND CO., 17, Queen-street, Leeds, Yorkshire.

SOLID DRAWN BRASS BOILER TUBES

FOR LOCOMOTIVE AND MARINE BOILERS

MUNTZ'S OR GREEN'S PROCESS

MUNTZ'S METAL COMPANY (LIMITED). FRENCH WALLS,

NEAR BIRMINGHAM.

MINERS' LAMP

GAUZE MANUFACTORY,

JOSH. COOKE AND CO. J.C. S. S. C. S.

MADE to DRAWING, DESCRIPTION, or MODEL. Illustrates Price Lists free, by post or otherw VALUABLE TESTIMONIALS FROM EMINENT FIRMS MIDLAND DAVY LAMP WORKS, BELMONT PASSAGE, LAWLEY STREET,

BIRMINGHAM.

NOTICE TO COLLIERY OWNERS, AND OTHERS.

ALDER AND SEWELL,

Engineers, Ship & Engine Smiths,

MANUFACTURERS OF

PIT CAGES, KEPS, TUBS AND SCREENS; FLAT, BALANCE, COUPLING AND CRANE CHAINS AND TANKS,

RICHMOND STREET IRONWORKS, MONKWEARMOUTH, SUNDERLAND.

PRICES ON APPLICATION.

SHUNTING.

OVER 3000 OF THE RAILWAY TRUCK AND CARRIAGE SHUNTER now in use.

(HESHUYSEN'S PATENT.) For particulars and Illustrated Price List apply to-F. G. AND W. FRANCIS,

RAILWAY SHUNTER FACTORY, FOLKESTONE.

RAILS FOR SALE.

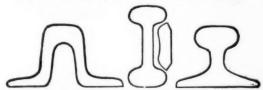
Bridge Section, 10 to 25 lbs. per yard. Flange Section, 16 to 70 lbs. per yard. DH Section. 50, 60, to 70 lbs. per yard. Steel Rails, 30, 36, 54, 58, to 66 lbs. per yard.

NEW PERFECT, NEW DEFECTIVE, AND SECONDHAND IN STOCK.

PERMANENT WAY RAILS, of all sections, made to order. For sections and price, apply

ROBERT WRIGHTSON. NEWPORT, MON.

JOHN BEATSON, DERBY.



RON AND STEEL RAILS, of all sections, from 10 to 82 lbs. per yard, new, defective, or second-hand.

POINTS AND CROSSINGS, FISH PLATES, BOLTS, NUTS, CHAIRS, AND SPIKES. LOCOMOTIVE ENGINES AND MACHINERY. MALLEABLE AND PIG-IRON OF ALL KINDS.
Delivered at all Ports and Railway Stations in Great Britain.
A SECONDHAND SIX-WHE-LED TANK LOCOMOTIVE FOR SALB.

G. HUTCHINSON AND CO., FORTH BANKS OIL WORKS. NEWCASTLE-ON-TYNE.

NEWCASTLE-ON-TYNE,

Beg to draw the attention of COLLIERY OWNERS and ENGINEERS to the Oils prepared by their special process. They never clog nor corrode, but keep the bearings cool and clean, and will be found the best and most ECONOMICAL LUBRICANTS at present in the market, being very DURABLE, UNIFORM IN QUALITY, and CHEAP. Prices, from 2s.

SPECIALLY ADVANTAGEOUS RATES FOR LARGE CONSUMERS. References to many eminent firms who have used them constantly for years, amongst whom may be mentioned Sir W. Armstrong and Co.; Elswick Engine and Ordmance Works, Newcastle; B. Stephenson and Co., Engineers, Newcastle; R. and W. Hawthorn, Engineers, Newcastle; Hawkes, Crawsinay, and Sons, Engineers, Gateshead-on Tyne; Abbot and Co., Engineers, Gateshead-on-Tyne, Samples, prices, &c., on spplication. AGENTS WANTED.

TO COLLIERY AND MINE OWNERS, ENGINEERS, IRONFOUNDERS,

AND CONTRACTORS, &c.

JAMES AND KNOTT,

DARLINGTON,

DARLINGTUN.

Are now in a position to SUPPLY their "SPECIAL" LUBRICATING OIL, PAINTS, PAINT OILS and VARNISHES of all kinds, TALLOW, SPUN VARNS, GREASE, COTTON WASTE, LEATHER BELTING, INDIA-RUBBER GOODS and STEAM PACKING, NAILS, BULTE, RIVETS, VI.ES, &c., from stock, in large or small quantities, on receipt of orders.

Quotations given for new and secondhand machinery or stores, &c., on application to—

JAMES AND KNOTT, COLLIERY AND ENGINEERS' STORES, DARLINGTON.

TRA

CE

Eng



PARIS INTERNATIONAL EXHIBITION, 1867.



VIENNA INTERNATIONAL EXHIBITION, 1873.



LONDON INTERNATIONAL EXHIBITION, 1874.

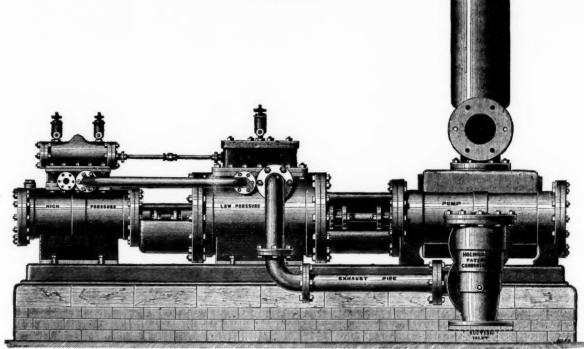


HOLMAN, TANGYE BROTHERS AND

10, LAURENCE POUNTNEY LANE, LONDON, E.C., AND BIRMINGHAM, (TANGYE BROTHERS), CORNWALL WORKS, SOHO.

THE "SPECIAL" DIRECT-ACTING COMPUOND STEAM PUMPING ENGINE.

For use in Mines, Water Works, Sewage Works, and all purposes where Economy of Fuel; essential.



After several years of successful application for all purposes to which steam-driven pumps can be applied, THE "SPECIAL" STEAM PUMP STILL MAINTAINS THE FIRST POSITION THE MARKET, notwithstanding that it alone—of all direct-acting pumps—has been subjected to the great variety of severe tests that must be encountered in such a period of time. Some valual improvements have been suggested in the course of a long experience, and their adoption has rendered the apparatus at once

THE SIMPLEST AND MOST CERTAIN IN ACTION.

The illustration shows an extension of the principle of this Pump to a Compound Steam Pumping Engine, by which the economical advantages resulting from the expansion and condensation steam are very simply and effectively obtained. The steam after leaving the high-pressure cylinder is received into and expanded in the low-pressure cylinder, and is thus used twice over before the being exhausted into the condenser or atmosphere. The Engine combines simplicity, certainty of action, great compactness, fewness of parts, and consequent reduction in wear and tear. Several thousands of the "Special" Steam Pumping Engines, with high-pressure cylinders only, are in use in British and Foreign Mines, Water Works, &c.,—and for confined situations, of whe Engines of a comparatively small size only are necessary, they will still meet all requirements—but their application will be very largely increased, since it has been found practicable to embrace important features of expanding and condensing the steam, so that increased power may be obtained, and the consumption of fuel greatly economised.

THE "SPECIAL" DIRECT-ACTING COMPOUND STEAM PUMPING ENGINE is the most simple appliance for deep mine draining and general purposes of pumping ever practically developed and the first cost is very moderate compared with the method of raising water from great depths by a series of 40 to 50 fathom lifts. No costly engine-houses or massive foundations, no repetitive plunger lifts, ponderous connecting rods, or complication of pit-work are required, while they allow a clear shaft for hauling purposes.

SIZES AND PARTICULARS.

				COL	VIINUE	D.		1						
cylinder	er 480 er 600	307 384	213 267	480 600	333 417	245 306	187 335	480 600	352 440	269 337	173 216	480 600	367 459	234 203
Height in feet water can be raised with 40 lbs. pressure per square inch in Non-condensi	ng 360	330	160	360	250	184	140	360	264	202	130	360	275	175
Diameter Ligh-pressure Steam Inlet	[n.] 14	11 11 12	1 t 1 t 1 t 1 t 1 t 1 t 1 t 1 t 1 t 1 t	11 12 14	1 ½ 1 ½	11/4	1 ½ 1 ¼	21 21 21	21 21 21	21 21 21	21 21 21	21 21	$\frac{2\frac{1}{4}}{2\frac{1}{2}}$	21 21 21
Length of stroke	In. 24 3900	24 6100 34	24 8800 4	24 6100 3½	8800 4	24 12,000 5	24 15,650 6	8,800 4	12,000 5	24 15,650 6	24 24,450 8	12,000 5	15,650 6	24,450 8
Diameter of High-pressure Cylinder Ditto of Low-pressure Cylinder Ditto of Water Cylinder Length of stroke	In. 8 In. 14 In. 4	8 14 5	8 14 6	10 18 5	10 18 6	10 18 7	10 18 8	12 21 6	12 21 7	12 21 8	12 21 10	14 24 7	14 24 8	14 24 10

					CONT	INUED.		1							1
Diameter Suction and Delivery In. Diameter High-pressure Steam Inlet In. Diameter Low-pressure Steam Exhaust In.	16 28 8 36 5,650 6 24 3	16 28 10 36 24,450 8 21 2	$\begin{array}{c} 16\\ 28\\ 12\\ 36\\ 35,225\\ 9\\ 2\frac{1}{2}\\ 3\\ \end{array}$	$ \begin{array}{r} 16\\ 28\\ 14\\ 36\\ 47,950\\ 10\\ 2\frac{1}{2}\\ 3 \end{array} $	18 32 8 48 13,650 6 3	18 32 10 48 24,450 8 3 3	18 32 12 48 35,225 9 3	18 32 14 48 47,950 10 3 3 ¹ / ₂	21 36 10 48 24,450 8 3½ 4	21 36 12 48 35,225 9 3½ 4	21 36 14 48 47,950 10 3½ 4	24 42 10 48 24,450 8 4 5	24 42 12 48 35,225 9 4 5	24 42 14 48 47,050 10 4 5	30 52 12 48 35,225 9 54 64
Height in feet water can be raised with 40 lbs. pressure per square inch in Non-condensing	360	230	160	118	456	292	202	149	397	276	202	518	360	264	562
	480 600	307 384	213 267	154 191	603 750	389 486	269 337	198 248	528 660	363 450	269 337	691 864	480 600	352 440	750 937

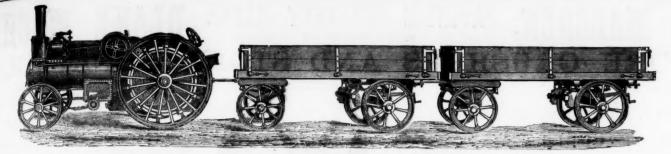
PRICES GIVEN ON RECEIPT OF REQUIREMENTS.

Any number of these Engines can be placed side by side, to work in conjunction or separately as desired, thereby multiplying the work of one Pump to any extent.

uel i

POSITION

3± 03



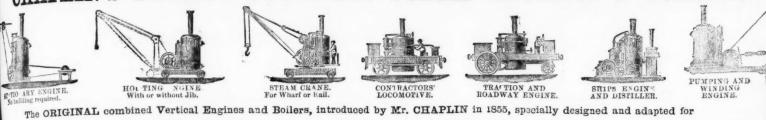
JOHN FOWLER AND

STEAM PLOUGH WORKS, LEEDS, AND 71, CORNHILL, LONDON, E.C.,

TRACTION ENGINES, ROAD LOCOMOTIVES, TRACTION WAGONS,

STEAM PLOUGHING MACHINERY OF EVERY DESCRIPTION.

CHAPLIN'S PATENT PORTABLE STEAM ENGINES & BOILERS.

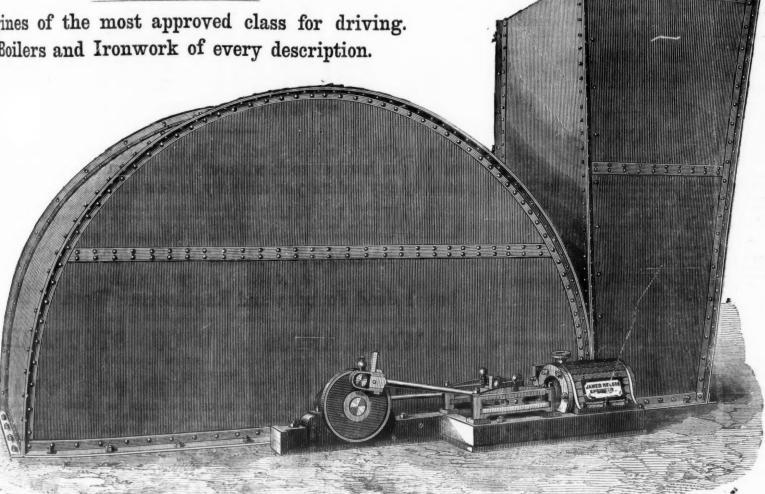


Winding, Hoisting, Sawing, Driving Machinery, and for General Contractors' Work, Railway Sidings, Coal Mines, Quarries, Gas Works, &c.

WIMSHURST. HOLLICK, & CO., ENCINEERS, 2, WALBROOK, LONDON, E.C. WORKS:—REGENT'S CANAL DOCK, 602, COMMERCIAL ROAD EAST, LONDON, E. (Near Stepney Station).

FAN

All sizes up to 40 ft. in stock or progress. Engines of the most approved class for driving. Boilers and Ironwork of every description.



AMES NELSON, Marine and Stationary Engine Works, GATESHEAD-ON-TYNE.

H. R. MARSDEN, BLAKE MACHI PATENTEE AND ONLY MAKER

STONE BREAKERS, ORE CRUSHERS AND

WITH THE

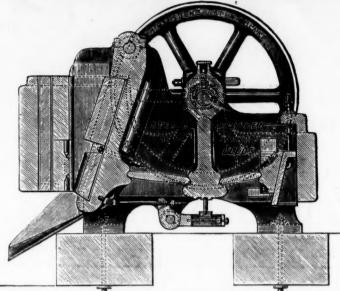
New Patent Reversible CRUSHING OR CUBING JAWS,

WHICH ARE CONSTRUCTED OF A PECULIAR

MIXTURE OF METAL, WEARING

Four times longer than any other.

60 GOLD AND SILVER MEDALS.



For Crushing to any de of Fineness, or Breaki to a required size.

Her Majesty's Governm USE THESE MACHINES

EXCLUSIVELY

ALSO ALL THE GREAT

Mining Companies of World.

OVER 2000 NOW

FIFTY per Cent., and upwards, saved by using these Machines.

TESTIMONIAL FROM MESSRS. JOHN TAYLOR AND SONS.

DEAR SIR,—We have adopted your Stone Breakers at many of the mines under our management, and are pleased to be able to state that they have in all cases given the greatest satisfaction.

We are, yours faithfully,

JOHN TAYLOR AND SONS.

Royal Agricultural Show, Liverpool, July, 1

DEAR SIR,—I have broken over 40,000 tons of very hard Limestone into goad Mer.
the Newport and other Road Trusts, in your PATENT STONE BREAKER, AND ALL
ONE PAIR OF JAWS, which are STILL IN USE. I do not think at all, but an quite sure
are the only Machines which fully perform the work you set them out to do, and there are
in the Show can at all compare with them.

Yours, truly,
H. R. Marsden, Esq.

WILLIAM PRICE, Contractor, Gold Cliff, Monna

INTENDING BUYERS ARE CAUTIONED AGAINST PURCHASING OR USING ANY OF THE NUMEROUS PATENTS OF H. R. MARSDEN. ILLUSTRATED CATALOGUES, TESTIMONIALS, and every information

MARSDEN, SOHO FOUNDRY, LEEDS, ENGLAND.

Are NOW PREPARED to SUPPLY their DRILLS, the ONLY ONES that have been SUCCESSFULLY WORKED in the MINES of CORNWALL. At DOLCOATH MINE, in the HARDEST known ROCK, a SINGLE MACHINE has, since its introduction in July, 1878, driven MORE THAN THREE TIMES the SPEED of HAND LABOUR, and at TWENTY PER CENT. LESS COST PER FATHOM.

In ordinary ends two machines may be worked together, and at a proportionately increased speed. They are strong, light, and simple, easily worked, and adapted for ends and stopes, and the sinking of winzes and shafts.

The company are also prepared to SUPPLY COMPRESSORS. and all necessary appliances for working the said Drills.

Apply to-LOAM AND SON, LISKEARD, CORNWALL.



By a special method of preparation, this leather is made solid, perfectly close is ature, and impermeable to water; it has, therefore, all the qualifications essen al for pump buckets, and is the most durable material of which they can be made imay be had of all dealers in leather, and of—

I. AND T. HEPBURN AND SONS, TANNERS AND CURRIERS, LEATHER MILLBAND AND HOSE PIPE MANUFACTURERS,

LONG LANE, SOUTH WARK, LONDON
Prise Medals, 1851, 1855, 1862, for
MILL BANDS, HOSE, AND LEATHER FOR MACHINERY PURPOSES.

Now ready, price 3s., by post 3s. 3d., Bixth Edition; Twentieth Thousand Copies much improved, and enlarged to nearly 300 pages.

H OPTON'S CONVERSATIONS ON MINES, between Father and Son. The additions to the work are near 80 pages of proful information.

POPTON'S CONVERSATIONS ON MINES, between Father and Son. The additions to the work are near 80 pages of useful information, principally questions and answers, with a view to assist applicants intending to pass an examination as mine managers, together with tables, rules of measurement, and other information on the moving and propelling power of ventilation, a subject which has caused so much controversy.

The following few testimonials, out of hundreds in Mr. Hopton's possession, speak to the value of the work:

"The book cannot fail to be well received by all connected with collieries."—Maning Journal.

"Its contents are really valuable to the miners of this country."—Miners Concrete.

erence.
"Such a work, well understood by miners, would do more to prevent colliery accidents than an army of inspectors."—Colliery Guardian.

London: MINING JOURNAL Office, 26, Fleet-street; and to be had of all book-

THE SOUTH WALES EVENING TELEGRAM THE GREAT ADVERTISING MEDIUM FOR WALES.

DALES BY ENING TELEGRAM

(DALES), and ZETTE

(WEEKLY), established 1857,

the largest and most widely circulated papers in Monmouthshire and South Wales

CHIEF OFFICES—NEWPOET, MON.; and at CARDIFF.

The "Evening Telegram" is published daily, the first edition at Three P.M., the second edition at Five F.M. On Friday, the "Telegram" is combined with the second walks Weekly Gazette," and advertisements ordered for not less than sive consecutive insertions will be inserted at an uniform charge in both papers. P. 9. O. and cheque payable to Henry Russell Evans, 14, Commercial-street Newport, Monmouthshire.

THE IRON AND COAL TRADES' REVIEW.

The IRON AND COAL TRADES' REVIEW is extensively circulated amongst the Iron Producers, Manufacturers, and Consumers, Coalowners, &c., in all the iron and coal districts. It is, therefore, one of the leading organs for advertising every description of Iron Manufactures, Machinery, New Inventions, and all matters esting to the Iron, Coal, Hardware, Engineering, and Metal Trades in general.

Offices of the Review: 7, Westminster Chambers, S.W.

Remittances payable to W. T. Pringle.

The Barrow Rock Drill BRYDON AND DAVIDSON'S ROCK DRI

SELECTED BY THE BRITISH AND OTHER GOVERNMENTS.

Reduced prices of this Rock Drill (formerly called "Kainotomon"), Nos. 1 and 2, £32 and £34 SUBJECT TO DISCOUNT.

IMPROVED AIR COMPRESSORS.

Makers of Pumping and Winding Engines, Steam Hamm Boilers, Pump Pipes, &c., &c. Castings of all kinds.

BRYDON AND DAVIDSON, ENGINEERS WHITEHAVEN.

BY ROYAL LETTERS PATENT.

This justly-celebrated Rock Drill, the only one invented that work in the hardest rock without more than the usual repairs quired by any ordinary machinery, is now offered to the public.

It has been most successfully worked in the well-known Hematite Mines of Lancashire and Cumberland. Will drive 50 to in hard rock without change of drill, and can be worked by any miner, and kept in repair by any blacksmith. It is the simple rock drill ever invented, and cannot with fair usage get out of order.

Plans, Estimates, including Compressors, and all other Mining Machinery, supplied on application to the sole makers,—

SALMON BARNES AND CO.,

MINING ENGINEERS.

Canal Head Foundry and Engineering Works, Ulverston

WOOD ASTON AND CO., STOURBRIDGE

(WORKS AND OFFICES ADJOINING CRADLEY STATION), Manufacturers of

CHAINS PIT INCLINE, AND CRANE, Also CHAIN CABLES, ANCHORS, and RIGGING CHAINS, IRON and STEEL SHOVELS, SPADE

FORKS, ANVILS, VICES, SCYTHES, HAY and CHAFF KNIVES, PICKS, HAMMERS, NAILS,
RAILWAY and MINING TOOLS, FRYING PANS, BOWLS, LADLES, &c., &c. Orab Winches, Pulley and Snatch Blocks, Screw and Lifting Jacks, Ship Knees, Forgings, and Use Iron of all description STOURBRIDGE FIRE BRICKS AND CLAY.

SINKING. BORING AND

WILLIAM COULSON AND SON

Are prepared to UNDERTAKE BORINGS for MINERAL EXPLORATION, either from the SURFACE or UNDERGE WORKINGS; BORINGS for WATER SUPPLIES or TUNNEL SOUNDINGS, &c., at fixed prices, according to the size of hole required; also to EXAMINE and REPORT upon the BEST MEANS to SECURE DEFECTIVE TUBBING.

Plans and specifications prepared for Shaft Tubbing, Wedging Cribs, Pumping, and General Sinking Arrangements Address: W. COULSON AND SON, SHAMROCK HOUSE, DURHAM

Frinted by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors) at their offices, 26, Flerry STREET, E.C., where all communications are requested to be address